

Specification for

Safety of household and similar electrical appliances

Part 102. Particular requirements

**Section 102.9 Toasters, grills, roasters
and similar appliances**

(Implementation of CENELEC HD 265 S2)

Sécurité des appareils électrodomestiques et
analogues
Partie 102. Règles particulières
Section 102.9 Les grille-pain, les grils, les
cocottes et appareils analogues

Sicherheit von Elektrogeräten für den
Haushalt und ähnliche Zwecke
Teil 102. Besondere Anforderungen
Abschnitt 102.9 Brotröster; Grillgeräte,
Bratgeräte und ähnliche Geräte

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Light Electrical Engineering Standards Policy Committee (LEL/-) to Technical Committee LEL/161, upon which the following bodies were represented:

Association for Consumer Research (ACRE)
 Association of Consulting Scientists
 Association of Control Manufacturers TACMA (BEAMA Ltd.)
 Association of Manufacturers of Domestic Electrical Appliances
 British Cable Makers Confederation
 British Eletrotechnical Approvals Board
 British Gas plc
 British Lawn Mower Manufacturers' Federation
 British Retailers' Association
 Catering Equipment Manufacturers' Association
 Consumer Policy Committee of BSI
 Department of Trade and Industry (Consumer Safety Unit, CA Division)
 ERA Technology Ltd.
 Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
 Electricity Supply Industry in United Kingdom
 Home Office
 Institute of Trading Standards Administration
 Institution of Electrical Engineers
 Lighting Industry Federation Ltd.
 Loss Prevention Council
 Portable Electric Tool Manufacturers' Association
 Rotating Electrical Machines Association (BEAMA Ltd.)
 Royal Society for the Prevention of Accidents
 Small Electrical Appliances Marketing Association

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

British Burn Association

This British Standard, having been prepared under the direction of the Light Electrical Engineering Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 30 April 1991

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Amendments issued since publication

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National foreword

This Section of BS 3456 : Part 102 has been prepared under the direction of the Light Electrical Engineering Standards Policy Committee. It is aligned with the CENELEC¹⁾ Harmonization Document for toasters, grills, roasters and similar appliances, HD 265 S2, which in turn is based on IEC²⁾ Publication 335-2-9 (1980-second edition). Its number is directly related to the number of the equivalent Section of the IEC publication.

It is a revision of BS 3456 : Section 3.17 : 1980 which is withdrawn in accordance with the CENELEC Internal Regulations.

It gives the particular requirements for toasters, grills, roasters and similar appliances, and is to be read in conjunction with BS 3456 : Part 101 : 1987 'General requirements' which it supplements or modifies. The many references to Part 1 should be read as references to BS 3456 : Part 101 which is the implementation of the CENELEC Harmonization Document for the general requirements, HD 251 S3. In the original IEC text of the particular requirements the precise line numbers in the IEC Part 1 are given. The lines in Part 101 of BS 3456 are not numbered but sufficient information has been included in these particular requirements for the relevant matter in Part 101 to be identified. For ease of production the text of the IEC standard has been used, but it has been modified as described below.

The CENELEC modifications that appear in HD 265 S2 have been included in the text in the appropriate position and are indicated by a single side line in the margin of the page. References are included to items of the original IEC text which are given in appendix X together with the justifications in the CENELEC Harmonization Document for the modifications.

A complete list of all national deviations to the CENELEC Harmonization Document is given in appendix Y.

In this British Standard the following print types are used to differentiate between requirements, test specifications and explanatory matter.

Requirements: in roman type

Test specifications: in italic type

Explanatory matter in small roman type

The CENELEC Harmonization Document was approved by the CENELEC Technical Board on 11 September 1984.

Cross-references

International standard	Corresponding British Standard
IEC 335-1 : 1976	BS 3456 Specification for safety of household and similar electrical appliances Part 101 : 1987 General requirements (Technically equivalent)
HD 251 S3 : 1982	
IEC 335-2-6 : 1986	
	BS EN 60335-2-6 Specification for safety of household and similar electrical appliances Part 2 Particular requirements Section 2.6 : 1991 Cooking ranges, cooking tables, ovens and similar appliances for household use
CEE Publication 15 : 1964	BS 3535 : 1962 Specification for safety isolating transformers for industrial and domestic purposes (Technically equivalent)

¹⁾ CENELEC = European Committee for Electrotechnical Standardization.

²⁾ IEC = International Electrotechnical Commission.

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The Technical Committee has reviewed the provisions of IEC 320, to which reference is made in **11.8** and **24.1** and has decided that they are acceptable for use in conjunction with this standard.

Product approval. Attention is drawn to the fact that products conforming to this British Standard may be approved by the British Electrotechnical Approvals Board for the purposes of participation in the CENELEC Certification Agreement and in the CB Scheme of the IECEE. (Details of the BEAB approval mark scheme are given on the inside back cover.)

Compliance with a British Standard does not of itself confer immunity from legal obligations.

British Standard Specification for

Safety of household and similar electrical appliances

Part 102 : Particular requirements

Section 102.9 Toasters, grills, roasters and similar appliances

1. Scope

This clause of Part 1 is applicable except as follows:

1.1 Replacement:

This standard applies to toasters, grills, griddles, waffle irons, roasters and similar appliances.

Appliances not intended for normal household use, but which nevertheless may be a source of danger to the public, such as appliances intended to be used by laymen in shops, in light industry and on farms, are also within the scope of this standard.

This standard does not take into account the special hazards which exist in nurseries and other places where there are young children or aged or infirm persons without supervision; in such cases, additional requirements may be necessary.

This standard does not apply to:

- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- appliances for high-frequency heating;
- separate stationary ovens and ovens and grills for building-in and appliances which are covered by IEC Publication 335-2-6;
- appliances designed exclusively for commercial catering or industrial purposes.

Until an IEC standard for appliances for commercial catering purposes is issued, this standard may form a guide to suitable requirements and tests for such appliances.

For appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary.

For appliances intended to be used in tropical countries, special requirements may be necessary.

Attention is drawn to the fact that in many countries additional requirements are specified by the national health authorities and the national authorities responsible for the protection of labour.

2. Definitions

This clause of Part 1 is applicable except as follows:

2.2.29 Replacement:

Conditions of adequate heat discharge denote that the appliance is operated under the following conditions:

Except for toasters, all appliances are operated empty and rotary grills are operated with no load on the rotating food support.

Toasters are loaded with the maximum number of slices of white bread specified in the manufacturer's instructions and operated intermittently in still air, each cycle comprising an operating period and a rest period. The bread is about 24 h old and the dimensions of the slices are approximately 100 mm × 90 mm × 10 mm. The rest periods have a duration of

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30 s or the minimum period required by any automatic control mechanism, whichever is the longer. The slices of bread are replaced during each rest period. For non-automatically controlled toasters, each operating period is terminated as soon as the bread shows a golden-brown colour. For automatically controlled toasters, the operating period is set by adjusting the control mechanism to give the bread a golden-brown colour.

Automatically controlled waffle irons are operated with the thermostat at the highest setting. Other waffle irons are operated, if necessary by switching them on and off, so that the average temperature at the centre of the heated surface is as close as possible to, but not less than, 210 °C, with temperature variations not exceeding ± 15 °C (15 K).

Roasters are operated with the lid closed. Automatically controlled roasters are operated with the control(s) adjusted so that the average temperature over the controlled cycle in the centre of the usable space is 240 ± 4 °C. Non-automatically controlled roasters are operated to maintain the same average temperature, if necessary by switching them on and off.

Radiant grills and rotary grills are operated with doors or hoods, if any, fully opened, except that, if the manufacturer's instructions indicate that they should be in some other position, they are placed in that position. Any reflectors intended to be placed above heating elements are placed in position. Any grill pans, grids or food supports are placed in the highest position(s) for radiant grills and in the lowest position(s) for rotary grills.

Contact grills, contact sandwich toasters and similar appliances are operated as described for waffle irons, but with the average temperature specified for the centre of the heated surface(s) increased to 275 °C.

Additional definitions:

2.2.101 *Toaster* denotes an appliance intended for toasting slices of bread by radiant heat.

2.2.102 *Radiant grill* denotes an appliance having a radiant heating element and a support on which the food is placed in order to expose it to the heat radiation for grilling

A radiant grill may be contained within a compartment. The compartment may be fitted with a door.

The cooking operation on a grill is known as grilling in some parts of the world and as broiling in other parts.

2.2.103 *Rotary grill* denotes an appliance having a radiant heating element and a rotating part in or on which food is supported in order to expose it to heat radiation for grilling and cooking.

A rotary grill may be contained within a compartment. The compartment may be fitted with a door.

A rotary grill contained within a compartment combined or not with an oven is known as a rotisserie.

2.2.104 *Contact grill* denotes an appliance having one or two heated surfaces in contact with the food to be grilled.

A contact grill with only one heated surface is also known as a griddle.

A contact grill having two heated surfaces is a form of sandwich toaster.