

DIN EN 30-1-1:2011-03 (E)

Domestic cooking appliances burning gas - Part 1-1: Safety - General (includes Amendment 2:2010)

Contents		Page
Foreword		5
1	Scope	6
2	Normative references	8
3	Terms and definitions	9
3.1	General terms and definitions	9
3.2	Terms and definitions relating to the appliance	9
3.3	Terms and definitions relating to gases and pressures	10
3.3.1	Terms and definitions relating to gases	10
3.3.2	Terms and definitions relating to pressures	12
3.4	Terms and definitions relating to the parts of the appliance	12
3.4.1	Burners	12
3.4.2	Auxiliary equipment, control devices	14
3.4.3	Other components	16
3.5	Terms and definitions relating to operation	17
4	Classification	19
4.1	Classification of gases	19
4.2	Categories of appliances	20
4.2.1	General	20
4.2.2	Category I	20
4.2.3	Category II	21
4.2.4	Category III	21
4.3	Classes of appliances (see Figure 2)	22
5	Constructional requirements	22
5.1	General	22
5.1.1	Conversion to different gases	22
5.1.2	Materials	23
5.1.3	Ease of cleaning and maintenance	25
5.1.4	Strength	25
5.1.5	Soundness of the gas circuit assembly	26
5.1.6	Connections	26
5.1.7	Movable appliances	28
5.1.8	Fixing or stability of appliances	28
5.1.9	Additional components	28
5.1.10	Safety of operation in the event of fluctuation, interruption and restoration of the auxiliary energy	28
5.1.11	Electrical safety of appliances and immunity to electromagnetic phenomena	28
5.2	Special requirements	29
5.2.1	Taps	29
5.2.2	Control handles	30
5.2.3	Injectors and adjusters	32
5.2.4	Oven thermostats	33
5.2.5	Ignition systems	34
5.2.6	Flame supervision devices	34
5.2.7	Regulators	34
5.2.8	Hotplates	35
5.2.9	Ovens and grills	37

5.2.10	Cylinder compartment	40
5.2.11	Appliances with a cooling fan	40
5.2.12	Accumulation of un-burnt gas	41
5.2.13	Food hygiene in time controlled ovens	42
5.3	Additional requirements for appliances having one or more burners that are capable of remote operation	42
5.3.1	Application	42
5.3.2	General	42
5.3.3	Remote operation (type 1)	43
5.3.4	Remote operation (type 2)	43
6	Performance requirements	43
6.1	General	43
6.1.1	Soundness	43
6.1.2	Obtaining the input rates	43
6.1.3	Flame supervision devices	44
6.1.4	Safety of operation	45
6.1.5	Heating	45
6.1.6	Temperature of the LPG cylinder and its compartment	48
6.1.7	Total input of the appliance	49
6.1.8	Regulator performance	49
6.1.9	Appliances with a cooling fan	49
6.1.10	Safety in the event of failure of the oven thermostat	52
6.2	Special requirements for hotplates	54
6.2.1	Ignition, cross-lighting and flame stability	54
6.2.2	Combustion	54
6.3	Special requirements for ovens and grills	55
6.3.1	Ignition, cross-lighting and flame stability	55
6.3.2	Combustion	56
7	Test methods	56
7.1	General	56
7.1.1	Reference and test gases	56
7.1.2	Test pressures	61
7.1.3	Test procedures	61
7.1.4	Pans	66
7.1.5	Ovens and grill temperatures	67
7.1.6	Appliances having a mains electrical supply	68
7.1.7	Appliances having one or more multi-ring hotplate burners	68
7.2	Verification of construction characteristics	68
7.2.1	Strength	68
7.2.2	Strength, stability	70
7.2.3	Accumulation of un-burnt gas in the appliance	71
7.2.4	Appliances with a glass lid having a device for shutting off the gas to the hotplate burners	72
7.2.5	Food hygiene in time controlled ovens	73
7.3	Verification of performance characteristics	73
7.3.1	General tests	73
7.3.2	Specific tests for hotplates	88
7.3.3	Specific tests for ovens and grills	96
8	Marking and instructions	102
8.1	Appliance marking (including any type 2 hand-operated control)	102
8.2	Marking of the packaging	103
8.3	Instructions	104
8.3.1	General	104
8.3.2	Technical instructions	104
8.3.3	Instructions for use and maintenance	106
8.3.4	Instructions for conversion to other gases	108
Annex A (informative)	National situations	121

A.1	General	121
A.2	Marketing in different countries of the categories listed in the text of the standard	121
A.3	Supply pressures for the appliances (see 7.1.2)	125
A.4	Particular categories marketed nationally or locally	127
A.4.1	National distribution	127
A.4.2	Categories	127
A.4.3	Gas rate adjusters	129
A.4.4	Permitted operations for changing gas	130
A.5	Test gases corresponding to the particular categories given in A.4	130
A.6	Particular conditions for Belgium	132
A.7	Connection requirements in force in various countries (see 5.1.6)	132
Annex B (informative) Guidelines for extension to other categories		134
Annex C (normative) Characteristics of the pans required		135
C.1	Pans required for testing on gas burners	135
C.2	Characteristics of pans for testing on electric cooking plates	137
Annex D (normative) Surface temperature probe (7.3.1.5.3.2)		138
D.1	Design	138
D.2	Validation test	138
D.2.1	Principle	138
D.2.2	Procedure	138
D.2.3	Validation	139
Annex E (normative) Use of symbols on the appliance and packaging		140
E.1	Information having to appear on the appliance and packaging, in accordance with Clause 8	140
E.1.1	Electricity supply	140
E.1.2	Type of gas	140
E.1.3	Pressure	141
E.1.4	Country	141
E.1.5	Category	141
E.2	Other optional information	141
E.2.1	General	141
E.2.2	Nominal heat input of a burner Q_n	142
E.2.3	Nominal heat input of all appliance burners Q_n	142
E.3	Information having to appear on the appliance and its packaging, in accordance with 8.1 and 8.2	142
Annex F (normative) Symbol "Do not shut lid when burner alight"		145
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 90/396/EEC		146
Bibliography		149