SLOVENSKI STANDARD
SIST EN 437:2005/oprA1:2007

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Preskusni plini - Preskusni tlaki - Kategorije naprav - Dopolnilo A1

Test gases - Test pressures - Appliance categories - Amendment A1

Prüfgase - Prüfdrücke - Gerätekategorien

Gaz d'essai - Pressions d'essai - Catégories d'appareils

Ta slovenski standard je istoveten z: **EN 437:2003/prA1**

ICS:

27.060.20	Plinski gorilniki	Gas fuel burners
91.140.40	Sistemi za oskrbo s plinom	Gas supply systems

SIST EN 437:2005/oprA1:2007 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
EN 437:2003

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ICS 27.060.20; 91.140.40

English Version

Test gases - Test pressures - Appliance categories

Gaz d'essai - Pressions d'essai - Catégories d'appareils

Prüfgase - Prüfdrücke - Gerätekategorien

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 238.

This draft amendment A1, if approved, will modify the European Standard EN 437:2003. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 437:2003/prA1:2007) has been prepared by Technical Committee CEN/TC 238 “Test gases, test pressures and categories of appliances”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

In Foreword of EN 437

Replace the four last paragraphs by the following ones:

This standard can be considered as an important stage in the harmonization of test gases, test pressures and appliance categories and the quality of information on gas usage in Europe.

The standard also applies to Albania, Bulgaria, Croatia, Republic of Macedonia and Turkey, countries whose national body is affiliate member of CEN (see annex D).

1 Scope

Unchanged

2 Normative references

Replace the introductory paragraph by the following (revised text in the CEN/CENELEC Internal Regulations, Part 3):

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Replace ISO 6976:1995 by EN ISO 6976:2005

Add:

EN ISO 13443:2005, *Natural gas – Standard reference conditions.*

3 Terms and definitions

In 3.1 and in its NOTE, replace:

"combustible gases" by "gaseous fuels"

4 Gases

4.1 Classification

Unchanged

4.2 Test gases

Replace 4th paragraph by:

The values in Tables 2 and 4, measured and expressed at 15 °C, are derived from EN ISO 6976:2005.

Replace Table 2 by the following one:

Table 2 – Characteristics of the test gases [a] for the first and second families, gas dry at 15 °C and 1 013,25 mbar

Gas family and Group	Test gases	Designation	Composition by volume % [e]	W_i MJ/m^3	H_i MJ/m^3	W_s MJ/m^3	H_s MJ/m^3	d
Gases of the first family [b]								
Group a	Reference gas Incomplete combustion, flame lift and sooting limit gas	G 110	CH_4 = 26 H_2 = 50 N_2 = 24	21,76	13,95	24,75	15,87	0,411
	Light back limit gas	G 112	CH_4 = 17 H_2 = 59 N_2 = 24	19,48	11,81	22,36	13,56	0,367
Gases of the second family [b]								
Group H	Reference gas	G 20	CH_4 = 100	45,67	34,02	50,72	37,78	0,555
	Incomplete combustion and sooting limit gas	G 21	CH_4 = 87 C_3H_8 = 13	49,60	41,01	54,76	45,28	0,684
	Light back limit gas	G 222	CH_4 = 77 H_2 = 23	42,87	28,53	47,87	31,86	0,443
	Flame lift limit gas	G 23	CH_4 = 92,5 N_2 = 7,5	41,11	31,46	45,66	34,95	0,586
	Over heating limit gas [f]	G 24	CH_4 = 68 C_3H_8 = 12 H_2 = 20	47,01	35,70	52,09	39,55	0,577
Group L	Reference gas light back limit gas	G 25	CH_4 = 86 N_2 = 14	37,38	29,25	41,52	32,49	0,612
	Incomplete combustion and sooting limit gas	G 26	CH_4 = 80 C_3H_8 = 7 N_2 = 13	40,52	33,36	44,83	36,91	0,678
	Flame lift limit gas	G 27	CH_4 = 82 N_2 = 18	35,17	27,89	39,06	30,98	0,629
Group E	Reference gas	G 20	CH_4 = 100	45,67	34,02	50,72	37,78	0,555
	Incomplete combustion and sooting limit gas	G 21	CH_4 = 87 C_3H_8 = 13	49,60	41,01	54,76	45,28	0,684
	Light back limit gas	G 222	CH_4 = 77 H_2 = 23	42,87	28,53	47,87	31,86	0,443
	Flame lift limit gas	G 231	CH_4 = 85 N_2 = 15	36,82	28,91	40,90	32,11	0,617
	Over heating limit gas [f]	G 24	CH_4 = 68 C_3H_8 = 12 H_2 = 20	47,01	35,70	52,09	39,55	0,577

[a] For gases used nationally or locally, see B.5.
[b] For other groups, see B.5.
[c] See also Table 4.
[d] The appliance standards may only specify one sooting limit gas.
[e] See also Annex A
[f] Limit gas used only for certain types of appliance, specified in the individual appliance standards

Add:

NOTE Table 3 of EN 437:2003 was integrated into Table 2. This document does not contain a Table 3.

Delete Table 3.

Replace Table 4 by the following one:

Table 4 - Characteristics of the test gases a for the third family, gas dry at 15 °C and 1 013,25 mbar

Gas family and Group	Test gases	Designation	Composition by volume % [e]	W_i MJ/m^3	H_i MJ/m^3	H_i MJ/kg	W_s MJ/m^3	H_s MJ/m^3	H_s MJ/kg	d
Gases of the third family [b]										
Third family and Groups B/ P	Reference gas		$n\text{-}C_4H_{10}$ = 50	80,58	116,09	45,65	87,33	125,81	49,47	2,075
	Incomplete combustion and sooting limit gas	G 30	$i\text{-}C_4H_{10}$ = 50							
	Flame lift limit gas	G 31	C_3H_8 = 100	70,69	88,00	46,34	76,84	95,65	50,37	1,550
and B	Light back limit gas	G 32	C_3H_6 = 100	68,14	82,78	45,77	72,86	88,52	48,94	1,476
Group P	Reference gas, Incomplete combustion, flame lift and sooting [d] limit gas	G 31	C_3H_8 = 100	70,69	88,00	46,34	76,84	95,65	50,37	1,550
	Light back and sooting limit gas [d]	G 32	C_3H_6 = 100	68,14	82,78	45,77	72,86	88,52	48,94	1,476

[a] For gases used nationally or locally, see B.5.
[b] For other groups, see B.5.
[c] See also Table 4.
[d] The appliance standards may only specify one sooting limit gas.
[e] See also Annex A.

Relace the text of the NOTE by the following one:

NOTE The characteristics for second family gases at reference conditions other than 15 °C for metering and 15 °C for combustion can be calculated using the coefficients given in EN ISO 13443, Annex A (Normative). As an example the characteristics of the reference gases of the second family at 0 °C for metering and for combustion and 1 013,25 mbar (dry gas) are given in Table 5.

5 Test pressures

In Table 6, after the lines 3rd family, 3B/P, add a line:

3rd family, 3P	G 31, G 32	30	25	35

In table 7, replace the first column by the following:

Appliance categories having as index
2nd family : 2E+
3rd family : 3+ (28-30⇆37 couple)
3rd family : 3+ (50⇆67 couple)
3rd family : 3+ (112⇆148 couple)

6 Classification of appliances

6.1.2.2 Appliances designed for use on second family gases only

Replace definition of I_{2R} by the following:

Category I_{2R}: appliances having a pressure governor using all the following gases of the second family and/or gases linked to the second family (gas groups H, E, L and LL) which can be adjusted manually in order to utilize the various gases of a group of the second family under the local condition of distribution (see Table B.6).

7 Choice of test gases and test pressures

Unchanged

8 Marking

Unchanged

Annex A
(normative)

Conditions for preparation of the test gases

Delete the reference to table 3 twice in the last paragraph.

Annex B
(informative)

National situations

B.1 General

Replace Table by the following one:

AT	Austria	IS	Iceland
BE	Belgium	IT	Italy
CH	Switzerland	LT	Lithuania
CY	Cyprus	LU	Luxembourg
CZ	Czech Republic	LV	Latvia
DE	Germany	MT	Malta
DK	Denmark	NL	Netherlands
EE	Estonia	NO	Norway
ES	Spain	PL	Poland
FI	Finland	PT	Portugal
FR	France	RO	Romania
GB	United Kingdom	SE	Sweden
GR	Greece	SI	Slovenia
HU	Hungary	SK	Slovakia
IE	Ireland		

B.2 Categories listed in the body of the standard marketed in the different countries

Replace Tables B.1 and B.2 by the following ones: