
Common test methods for cables under fire conditions - Test for resistance to vertical flame propagation for a single insulated conductor or cable -- Part 1: Apparatus

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Allgemeine Prüfverfahren für das Verhalten von Kabeln und isolierten Leitungen im Brandfall - Prüfung der vertikalen Flammenausbreitung an einer Ader oder einem Kabel - Teil 1: Prüfgerät

Méthodes d'essai communes aux câbles soumis au feu - Essai de résistance à la propagation verticale de la flamme sur un conducteur ou câble isolé -- Partie 1: Appareillage d'essai

Ta slovenski standard je istoveten z: EN 50265-1:1998

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
29.060.20	Kabli	Cables

SIST EN 50265-1:1999**en**

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EUROPEAN STANDARD
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EN 50265-1

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ICS 13.220.40; 29.060.20

Supersedes HD 405.1 S1:1983 + A1:1992 & HD 405.2 S1:1991

Descriptors: Electrical installation, electrical cables, insulated conductors, insulated cables, fire tests, flammability tests, flame propagation, test equipment

English version

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

FOREWORD

This European Standard was prepared by the Technical Committee CENELEC TC20, Electric Cables.

When used in conjunction with EN 50265-2-1 and EN 50265-2-2 this European Standard supersedes HD 405.1 S1 + A1 and HD 405.2 S1 respectively.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50265-1 on 1998-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1999-03-01
- latest date by which national standards conflicting
with the EN have to be withdrawn (dow) 2000-03-01

Annexes designated "informative" are given for information only.
In this standard, Annex A is informative.

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1 Scope

EN 50265 specifies methods of test for resistance to vertical flame propagation for a single electrical insulated conductor or cable, or optical cable, under fire conditions. This Part 1 details the apparatus. The procedures, together with informative annexes of recommended requirements for conformity, are given in Part 2.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 60695-2-4/1 Fire hazard testing -- Part 2: Test methods -- Section 4/Sheet 1: 1 kW nominal pre-mixed test flame and guidance

EN 60695-4 Fire hazard testing -- Part 4: Terminology concerning fire tests

NOTE: IEC 60695 is in the course of re-numbering its Parts and Sections. This will also affect the equivalent ENs.

3 Definition <https://standards.iteh.ai/catalog/standards/sist/26c40006-2de6-448f9e06-958573fda402/sist-en-50265-1-1999>

For the purposes of EN 50265-1 the following definition applies. The definition is taken from EN 60695-4.

3.1 ignition source: A source of energy that initiates combustion.

4 Test apparatus

4.1 Components

The test apparatus shall comprise the following:

- a) A three-sided metallic screen (4.2)
- b) An ignition source (4.3)
- c) A suitable chamber (4.4)

4.2 Metallic screen

A three-sided metallic screen (1200 ± 25) mm high, (300 ± 25) mm wide and (450 ± 25) mm deep with open front and closed top and bottom, (see figure 1) , shall be assembled.

4.3 Ignition source

4.3.1 General

The ignition source shall be a gas burner as specified in 4.3.2 or 4.3.3. The burner shall be fed with technical grade propane of nominal 95% purity.

4.3.2 Ignition source 1 (for 1 kW pre-mixed flame)

Except as modified in 4.3.1 above, the ignition source shall comply with EN 60695-2-4/1, which includes a method of confirmation of the test flame.

NOTE: EN 60695-2-4/1 specifically refers to the need to study also EN 60695-2-4/0.

4.3.3 Ignition source 2 (for diffusion flame)

The ignition source shall be a propane burner complying with Figure 2.

NOTE: In order to obtain the 8 mm bore shown in Figure 2 it is permitted to fit an adaptor to burners not otherwise complying.

The burner shall produce a luminous flame when in a vertical position with the air inlet closed. The gas flow shall be adjusted so that the total length of the luminous flame is (125 ± 25) mm (see Figure 3).

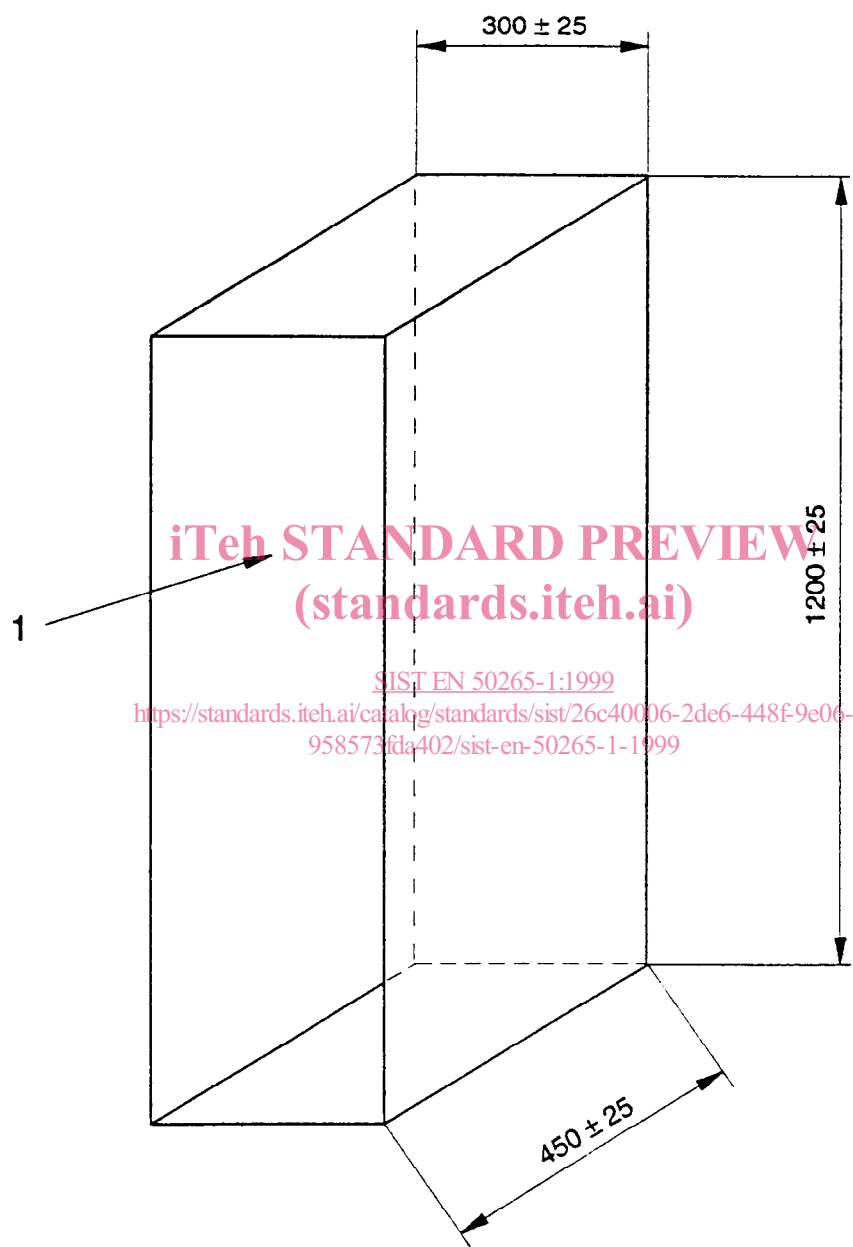
4.4 Chamber

The metallic screen and ignition source shall be contained within a suitable chamber, substantially free from draughts during the test duration, but with facilities for disposing of noxious gases resulting from burning. The chamber shall be maintained at a temperature of (23 ± 10) °C.

NOTE 1: If the requirement for the draught-free closed area is met by the use of a standard fume cupboard, it must be capable of independent operator-control of the extractor fan such as to permit operation with the extractor "OFF". Some fume cupboards may not be supplied with this facility.

NOTE 2: If a fume cupboard is used as the draught-free test area, the following safe operating practice is recommended:

- a) turn off extractor fan, seal the outlet;
- b) pull down front door of fume cupboard to leave a gap sufficient to manipulate burner into position;
- c) ensure operator is protected;
- d) do not move the door of the fume cupboard during the test;
- e) at the end of the test evacuate the fume cupboard fully before opening the door.



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1 - Front open space

Dimensions in millimetres

Figure 1: Test apparatus - Metallic screen

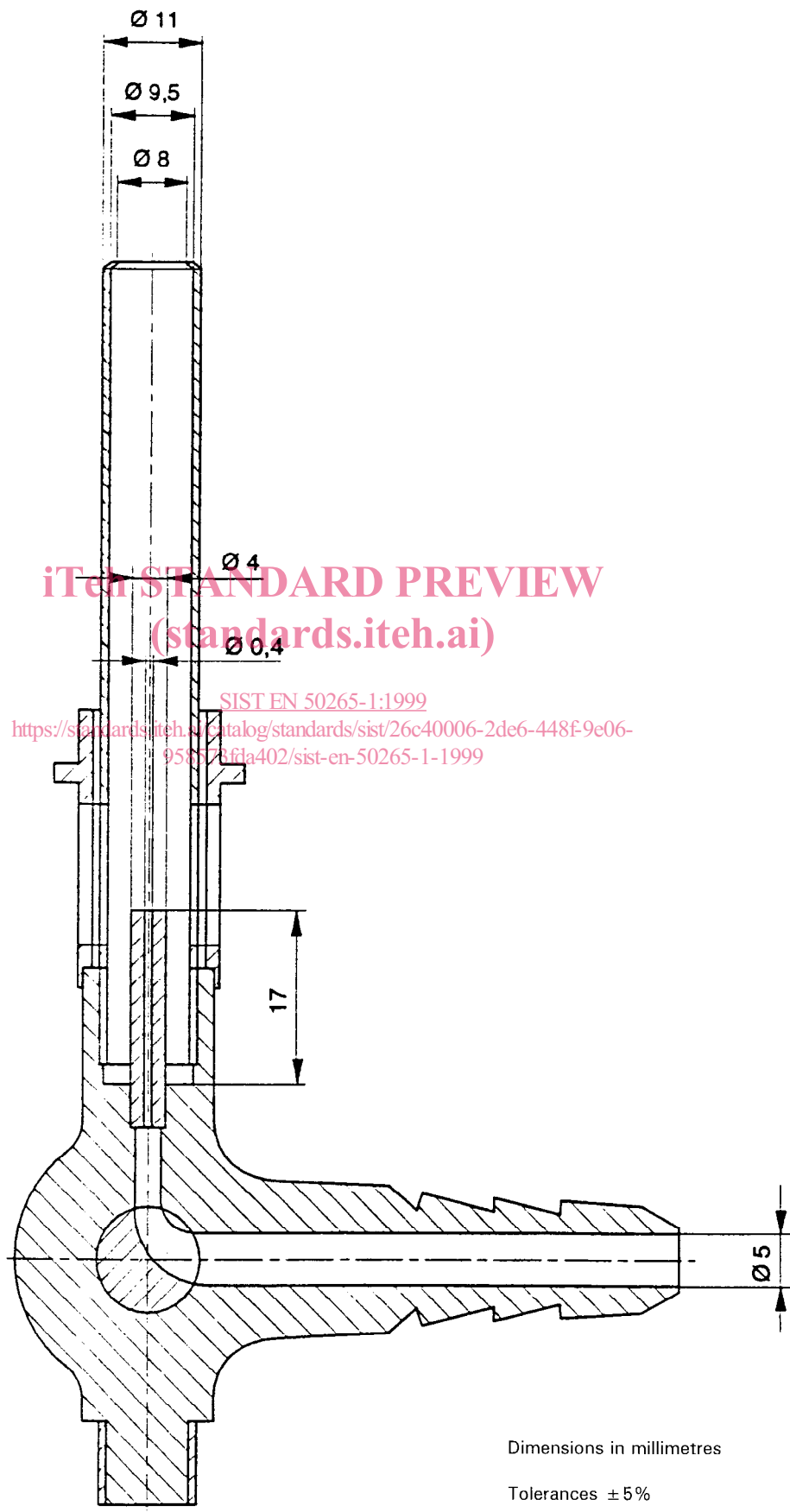


Figure 2: Details and dimensions of propane burner (diffusion flame)