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(IEC 695-2-4/0 : 1991)

Fire hazard testing Part 2 : Test methods—Section 4/sheet 0 : Diffusion type and premixed type flame test methods

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

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In the event of any doubts arising as to the contents, the original JIS is to be the final authority.

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Fire hazard testing

Part 2: Test methods

Section 4/sheet 0: Diffusion type and premixed type flame test methods

Foreword for Japanese Industrial Standard

This Japanese Industrial Standard has been prepared based on the 1st edition issued in 1991 of IEC 695-2-4/0 *Fire hazard testing, Part 2: Test methods - Section 4/sheet 0: Diffusion type and premixed type flame test methods* without changing the technical contents.

Furthermore, the "Informative references" that are indicated by underline (dotted line) are not included in the original International Standard.

1 Scope

This Japanese Industrial Standard gives guidance on the design of flame test methods and general requirements for the test apparatus to produce a series of test flames and the correlated confirmatory tests. Additional detailed information, needed for the production of specific flames, is published in a series of sheets: for example, JIS C 0069-1995.

Informative reference: The series of standards are, for example, IEC 695-2-4/1: 1991 *Fire hazard testing, Part 2: Test methods - Section 4/sheet 1: 1 kW nominal premixed test flame and guidance*, IEC 695-2-4/2: 1994 *Fire hazard testing, Part 2: Test methods - Section 4/sheet 2: 500 W nominal premixed test flame and guidance*, etc. which are established as IEC 695-2-4 series. JIS C 0069-1995 is identical to IEC 695-2-4/1: 1991.

2 Normative references

The following standards contain provisions which, through in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

IEC 695-2-4/1: 1991, *Fire hazard testing. Part 2: Test methods, Section 4/sheet 1: 1 kW nominal premixed test flame and guidance.*

ISO 4046: 1978, *Paper, board, pulp and related terms - Vocabulary.*

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3 Requirements

Standardized test flames shall conform to the detailed requirements, given in the appropriate series of standards.

Due consideration shall be given to this Standard during the development of test methods.

4 Test method

4.1 Principle

Flame tests are intended to simulate the effect of flames occurring in the early stages of an outbreak of fire in the environment of an electrotechnical product in order to assess by a simulation technique the acceptability of the fire hazard.

The tests are applied to ensure:

a) that, under defined conditions, the test flame does not cause ignition of parts, or

b) that a combustible part, which might be ignited by the test flame under defined conditions, has a limited duration of burning or a limited extent of burning, without spreading fire by flames or by burning or glowing particles falling from or through the specimen.

The needle-flame test specified in JIS C 0061-1993 is a test intended to simulate the effect of small flames which my result from fault conditions within the equipment, to assess the fire hazard.

The test flame is applied to that part of the surface of the specimen which is likely to be affected by flames resulting from normal use or fault conditions, or from any accidentally applied source of ignition.

To evaluate the possibility of spread of fire, where the environment of the specimen is known, a layer of the material or components normally surrounding or situated underneath the specimen shall be arranged as specified in the relevant specification. It is recommended that if the environment in which the specimen is to be used is unknown, a piece of soft white-wood board, covered with a single layer of wrapping paper* is positioned at a distance of 200 mm ± 5 mm below the place where the flame is applied to the specimen.

* Wrapping tissue as specified in clause 6.86 of ISO 4046 (1978). A soft and strong lightweight wrapping paper of grammage between 12g/m² and 30g/m², primarily intended for protective packaging of delicate articles and for gift wrapping.

Informative reference 1 JIS C 0061-1993 is identical to IEC 695-2-2: 1991 [*Fire hazard testing, Part 2: Test methods, Section 2: Needle-flame test*].

Informative reference 2 The wrapping tissue specified in ISO 4046 is differ from the tissue paper (JIS S 3104 *Facial tissues*) that is generally used in our country.

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