

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Household and similar electrical appliances – Safety –
Part 2-24: Particular requirements for refrigerating appliances, ice-cream
appliances and ice-makers**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-24: Règles particulières pour les appareils de réfrigération, les
sorbetières et les fabriques de glace**



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REDLINE VERSION

VERSION REDLINE



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

IEC 60335-2-24 Amendment 2 to
Edition 7.0 2017-04

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

**Part 2-24: Particular requirements for refrigerating appliances,
ice-cream appliances and ice makers**

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by subcommittee 61C: Safety of refrigeration appliances for household and commercial use, of technical committee 61: Safety of household and similar electrical appliances.

The text of this interpretation sheet is based on the following documents:

FDIS	Report on voting
61C/730/FDIS	61C/734/RVD

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table.

SC 61C interpretation sheet on: Subclause 30.2.101 with respect to testing of built-in appliances and interpretation of accessible non-metallic material

Questions: Some questions have arisen over the text added to 30.2 and 30.2.101 via AMD2 concerning non-metallic material on the external rear surfaces of an appliance that is in direct contact with thermal insulation. These are:

- Is the non-metallic material on the external rear surfaces of an appliance that is in direct contact with thermal insulation considered to be “accessible non-metallic material” ?
- Does the term “accessible” have the meaning defined in 3.6.3 of Part 1 ?
- What force is applied to test probe B when judging accessibility ?
- For built-in appliances, is accessibility judged before the appliance is built-in ?

Relevant text from IEC 60335-2-24 AMD2

The addition to 30.2 states:

For accessible thermal insulation and non-metallic material on the external rear surfaces of an appliance having an area exceeding 75 cm² that is in direct contact with the thermal insulation, compliance is checked by the test of 30.2.101.

Subclause 30.2.101 states:

30.2.101 *Accessible thermal insulation and non-metallic material on the external rear surfaces of an appliance that is in direct contact with thermal insulation*

- *is subject to the needle-flame test (NFT) of Annex E; or*
- *shall comprise material classified as V-0 or V-1 according to IEC 60695-11-10 provided that the test sample used for the classification was no thicker than the relevant part of the appliance.*

Non-metallic material

- *that is within 150 mm from the top surface of the appliance;*
- *that is on the left side or right side of the motor-compressor compartment;*
- *that has an area not exceeding 75 cm² that is in direct contact with the thermal insulation*

is not tested.

ANSWERS

- a) Yes
- b) Yes
- c) The test probe is applied with a force not exceeding 1 N
- d) Yes. This is irrespective of the last paragraph of 5.10 of Part 1

INTERNATIONAL ELECTROTECHNICAL COMMISSION

IEC 60335-2-24
Edition 7.0 2010-02
Amendment 2: 2017-04

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –**

**Part 2-24: Particular requirements for refrigerating appliances,
ice-cream appliances and ice makers**

INTERPRETATION SHEET 2

This interpretation sheet has been prepared by subcommittee 61C: Safety of refrigeration appliances for household and commercial use, of technical committee 61: Safety of household and similar electrical appliances.

The text of this interpretation sheet is based on the following documents:

DISH	Report on voting
61C/839/DISH	61C/853/RVDISH

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table.

SC 61C interpretation sheet on: Subclause 30.2 of IEC 60335-2-24:2010/AMD2:2017

Subclause 30.2 states:

"Add the following to the addition:

For accessible thermal insulation and non-metallic material on the external rear surfaces of an appliance having an area exceeding 75 cm² that is in direct contact with the thermal insulation, compliance is checked by the test of 30.2.101."

Question 1: Has this subclause to be interpreted as:

"Add the following to the addition:

For accessible thermal insulation and non-metallic material on the external rear surfaces of an appliance having a total area exceeding 75 cm² that is in direct contact with the thermal insulation, compliance is checked by the test of 30.2.101."

Subclause 30.2.101, final bullet point states:

- *"that has an area not exceeding 75 cm² that is in direct contact with the thermal insulation is not tested. "*

Question 2: Has this bullet point to be interpreted as:

- *"that has a total area not exceeding 75 cm² that is in direct contact with the thermal insulation is not tested. "*

Answers:

Question 1 –

From Subclause 30.2 addition, the following materials shall be tested:

- 1) Accessible thermal insulation
- 2) Non-metallic material on the rear surface of the appliance having an area exceeding 75 cm² that is in direct contact with the thermal insulation

Small holes (< 3 mm²) in the outer case were not intended to be considered as "accessible thermal insulation". These small < 3 mm² holes are much smaller than the test probe B, so therefore the thermal insulation of 3 mm² holes is automatically not considered as accessible thermal insulation without additional evaluation.

When testing accessible thermal insulation, the test is intended to be performed by applying the flame to the accessible thermal insulation on the end product.

Question 2 – See question 1.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-24: Particular requirements for refrigerating appliances,
ice-cream appliances and ice-makers**

FOREWORD

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IEC 60335-2-24 edition 7.2 contains the seventh edition (2010-02) [documents 61C/459/FDIS and 61C/461/RVD], its amendment 1 (2012-05) [documents 61C/506/FDIS and 61C/509/RVD], its amendment 2 (2017-04) [documents 61C/694/FDIS and 61C/700/RVD] its interpretation sheet 1 of April 2018 and 2 of March 2020.

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

This part of International Standard IEC 60335 has been prepared by subcommittee 61C: Household appliances for refrigeration, of IEC technical committee 61: Safety of household and similar electrical appliances.

This seventh edition constitutes a technical revision.

The principal changes in this edition as compared with the previous edition of IEC 60335-2-24 are as follows (minor changes are not listed):

- aligns the text with IEC 60335-1, and its Amendments 1 and 2;
- clarifies the term “household and similar use” (1, 7.12);
- updates marking requirements for supply terminals of battery operated appliances (7.6, 7.101);
- introduces requirements for appliances using transcritical refrigerant systems (3.112, 3.113, 3.114, 3.115, 3.116, 7.1, 7.6, 7.12.1, 22.103, 24.1.4, 24.102);
- introduces an enhanced flexing test (23.3);
- introduces requirements for accessible glass panels (22.116);
- clarifies tests for appliances using flammable refrigerants (22.107, Annex DD)

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fourth edition (2001) of that standard.

NOTE 1 When “Part 1” is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for electric refrigerating appliances, ice-cream appliances and ice-makers.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, can be found on the IEC website.

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The following differences exist in the countries indicated below.

- 22.101 : E12 and E17 lamp holders are checked as specified for E14 and B15 lamp holders. E26 lamp holder is checked as specified for E27 and B22 lamp holders (Japan).
- 22.110 : For unsealed glass tube heaters, the temperature requirements are different (Japan).

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