





**THIS PUBLICATION IS COPYRIGHT PROTECTED**  
**Copyright © 2012 IEC, Geneva, Switzerland**

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.  
If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

### About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

### About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

#### Useful links:

IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

The advanced search enables you to find IEC publications by a variety of criteria (reference number, text, technical committee,...).

It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Stay up to date on all new IEC publications. Just Published details all new publications released. Available on-line and also once a month by email.

Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - [webstore.iec.ch/csc/iec-](http://webstore.iec.ch/csc/iec-)

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).

### A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

### A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente. un corrigendum ou amendement peut avoir été publié.

#### Liens utiles:

Recherche de publications CEI - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

La recherche avancée vous permet de trouver des publications CEI en utilisant différents critères (numéro de référence, texte, comité d'études,...).

Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

Just Published CEI - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Restez informé sur les nouvelles publications de la CEI. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - [www.electropedia.org](http://www.electropedia.org)

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (VEI) en ligne.

Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [csc@iec.ch](mailto:csc@iec.ch).

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



AMENDMENT 1  
AMENDEMENT 1

**Household and similar electrical appliances – Safety –  
Part 2-11: Particular requirements for tumble dryers**

**Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-11: Règles particulières pour les sèche-linge à tambour**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX



ICS 13.120; 97.060

ISBN 978-2-83220-432-0

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## FOREWORD

This amendment has been prepared by committee 61: Safety of household and similar electrical appliances.

The text of this amendment is based on the following documents:

FDIS	Report on voting
61/4434/FDIS	61/4493/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

---

### Contents

*Replace the title of Clause 3 by the following:*

Terms and definitions

*Replace the title of Annex CC by the following:*

Equipment protection by type of protection "n"

## FOREWORD

*In Note 2, replace the title of Annex CC by the following:*

Equipment protection by type of protection "n"

## 3 Definitions

*Replace the title of Clause 3 but not the clause number, by the following:*

### Terms and definitions

*Add the following new definition:*

#### 3.103

##### **cool down period**

final part of the **tumble dryer** cycle where the drum is continuously rotated with reduced power to the heating element and with air circulation in order to reduce the possibility of spontaneous combustion of the clothes load

NOTE Continuous rotation does not mean rotation in same direction if the intended operation is to reverse direction in normal use.

## 7 Marking and instructions

*7.12 Delete the fifth dashed item from the third paragraph.*

## 11 Heating

*11.8 Add the following to the addition:*

*The exhaust temperature of the air from the drum, measured at the first lint filter after the air passes the clothes load, shall be measured for the purposes of 22.105.*

## 19 Abnormal operation

*19.9 Replace the existing text by the following.*

*Addition:*

*The running overload test is carried out on appliances that have overload protective devices incorporating electronic circuits to protect the windings of the drum motor. However the test is not carried out if the protective device senses the winding temperature directly.*

## 20 Stability and mechanical hazards

*20.101 Delete the last sentence of the requirement.*

*Add the following new subclause:*

**20.104** For appliances having a door on a vertical surface with an opening exceeding 200 mm and a drum having a volume exceeding 60 dm<sup>3</sup>, it shall not be possible to start the

drum motor after closing the door until a separate means which controls the movement of the drum is operated manually.

NOTE The volume can be calculated from the maximum depth and the maximum inner diameter of the drum.

*Compliance is checked by the following test.*

*The appliance is supplied at **rated voltage**, and the door is opened and then closed.*

*If compliance relies on the operation of an **electronic circuit**, the test is repeated under the following conditions applied separately:*

- the fault conditions in a) to g) of 19.11.2 are applied one at a time to the **electronic circuit**;*
- the electromagnetic phenomena tests of 19.11.4.2 and 19.11.4.5 are applied to the appliance.*

*The drum motor shall not start.*

*If the **electronic circuit** is programmable, the software shall contain measures to control the fault/error conditions specified in Table R1 and is evaluated in accordance with the relevant requirements of Annex R.*

## 22 Construction

**22.104** *Replace the requirement by the following:*

The operation of **protective devices** for the heating circuit shall not disable the **cool down period**, if any.

*Add the following new subclause:*

**22.105** In order to reduce the risk of spontaneous combustion of the clothes load, the drying cycle shall conclude with a **cool down period** to reduce the temperature of the normal clothes load to a suitable value.

This requirement is not applicable to appliances having a drying cycle air temperature not exceeding 55 °C.

*Compliance is checked by the following test.*

*The appliance is operated under the conditions in Clause 11 and the exhaust temperature of the air from the drum shall be measured at the first lint filter after the air passes the clothes load in the drum.*

*At end of the **cool down period** the air temperature shall not exceed 55 °C.*

## 29 Clearances, creepage distances and solid insulation

**29.2** *Add the following new paragraph*

The requirement for a minimum CTI value of 250 is not applicable to **functional insulation** if the **working voltage** does not exceed 50 V.

## Annexes

Add, before Annex AA, the following new Annex R:

### Annex R (normative)

#### Software evaluation

##### R.2.2.5 Modification:

For programmable **electronic circuits** with functions requiring software incorporating measures to control the fault/error conditions specified in Table R.1 or Table R.2, detection of a fault/error shall occur before compliance with Clause 19 and with 20.104 is impaired.

##### R.2.2.9 Modification:

The software and safety-related hardware under its control shall be initialized and shall terminate before compliance with Clause 19 and with 20.104 is impaired.

#### Annex BB – Tumble dryers that use a refrigerating system incorporating sealed motor-compressors for carrying out the drying process

## 2 Normative references

Replace the existing reference to IEC 60079-15 by the following:

IEC 60079-15:2010, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"*

Add the following new reference:

ISO 7010:2011, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

7.6 Replace the existing text by the following:



Symbol ISO 7010 W021

Warning; Risk of fire / Flammable materials

## 22 Construction

22.205 In the requirement, replace “The insulation” by “For **tumble dryers** that use **flammable refrigerants**, the insulation”

## Annex CC

Replace existing Annex CC by the following.



## **Annex CC** (normative)

### **Equipment protection by type of protection "n"**

Where reference is made to IEC 60079-15, the following clauses are applicable as modified below.

#### **11 Supplementary requirements for non-sparking luminaires**

All of the subclauses of Clause 11 are applicable, except 11.2.4.1, 11.2.4.5, 11.2.5, 11.2.6, 11.2.7, 11.3.4, 11.3.5, 11.3.6 and 11.4.

#### **16 General supplementary requirements for equipment producing arcs, sparks or hot surfaces**

Clause 16 is applicable.

#### **17 Supplementary requirements for enclosed-break devices and non-incendive components producing arcs, sparks or hot surfaces**

Clause 17 is applicable.

#### **18 Supplementary requirements for hermetically sealed devices producing arcs, sparks or hot surfaces**

Clause 18 is applicable.

#### **19 Supplementary requirements for sealed devices producing arcs, sparks or hot surfaces**

All of the subclauses of Clause 19 are applicable, except 19.1 and 19.6, which are replaced by the following.

##### **19.1 Non-metallic materials**

Seals are tested using 22.5. However if the device is tested in the appliance, then 22.5.1 and 22.5.2 are not applicable. After the tests of Clause 19 in IEC 60335-2-11, by inspection, no damage that could impair the type of protection shall be evident.

##### **19.6 Type tests**

The type tests described in 22.5 shall be performed where relevant.

#### **20 Supplementary requirements for restricted-breathing enclosures protecting equipment producing arcs, sparks or hot surfaces**

Clause 20 is applicable.



## **Bibliography**

*Delete reference to ISO 13732-1.*

---

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/57e0eb97-af22-403e-948a-925d99b0fbbe/iec-60335-2-11-008-amd1-2012>

<https://standards.iteh.ai/catalog/standards/sist/57e0eb97-af22-403e-948a-925d99b0fbbe/iec-60335-2-11-008-amd1-2012>

Withdawn

## AVANT-PROPOS

Le présent amendement a été établi par le comité d'études 61 de la CEI: Sécurité des appareils électrodomestiques et analogues.

Le texte de cet amendement est issu des documents suivants:

FDIS	Rapport de vote
61/4434/FDIS	61/4493/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cet amendement.

Le comité a décidé que le contenu de cet amendement et de la publication de base ne sera pas modifié avant la date de stabilité indiquée sur le site web de la CEI sous "<http://webstore.iec.ch>" dans les données relatives à la publication recherchée. A cette date, la publication sera

- reconduite,
- supprimée,
- remplacée par une édition révisée, ou
- amendée.

NOTE L'attention des Comités Nationaux est attirée sur le fait que les fabricants d'appareils et les organismes d'essai peuvent avoir besoin d'une période transitoire après la publication d'une nouvelle publication CEI, ou d'une publication amendée ou révisée, pour fabriquer des produits conformes aux nouvelles exigences et pour adapter leurs équipements aux nouveaux essais ou aux essais révisés.

Le comité recommande que le contenu de cette publication soit entériné au niveau national au plus tôt 12 mois et au plus tard 36 mois après la date de publication.

**IMPORTANT – Le logo "colour inside" qui se trouve sur la page de couverture de cette publication indique qu'elle contient des couleurs qui sont considérées comme utiles à une bonne compréhension de son contenu. Les utilisateurs devraient, par conséquent, imprimer cette publication en utilisant une imprimante couleur.**

### Sommaire

*Remplacer le titre de l'Article 3 par ce qui suit:*

Termes et définitions

*Remplacer le titre de l'Annexe CC par ce qui suit:*

Protection des appareils par mode de protection "n"