



CSA C22.2 No. 60335-2-12:20

Household and similar electrical appliances — Safety — Part 2-12: Particular requirements for warming plates and similar appliances
(IEC 60335-2-12:2002+A1:2008+A2:2017, MOD)

CSA C22.2 n° 60335-2-12:20

Appareils électrodomestiques et analogues — Sécurité — Partie 2-12 : Règles particulières pour les chauffe-plats et appareils analogues
(IEC 60335-2-12:2002+A1:2008+A2:2017, MOD)



Standards Council of Canada
Conseil canadien des normes

Legal Notice for Standards

Canadian Standards Association (operating as “CSA Group”) develops standards through a consensus standards development process approved by the Standards Council of Canada. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop a standard. Although CSA Group administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

Disclaimer and exclusion of liability

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document’s fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party’s intellectual property rights. CSA Group does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA Group makes no representations or warranties regarding this document’s compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA GROUP, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA GROUP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA Group is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA Group accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

CSA Group is a private not-for-profit company that publishes voluntary standards and related documents. CSA Group has no power, nor does it undertake, to enforce compliance with the contents of the standards or other documents it publishes.

Intellectual property rights and ownership

As between CSA Group and the users of this document (whether it be in printed or electronic form), CSA Group is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trade-marks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA Group’s and/or others’ intellectual property and may give rise to a right in CSA Group and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by treaty or by law, CSA Group reserves all intellectual property rights in this document.

Patent rights

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. CSA Group shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

Authorized use of this document

This document is being provided by CSA Group for informational and non-commercial use only. The user of this document is authorized to do only the following:

If this document is in electronic form:

- load this document onto a computer for the sole purpose of reviewing it;
- search and browse this document; and
- print this document if it is in PDF form.

Limited copies of this document in print or paper form may be distributed only to persons who are authorized by CSA Group to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may not permit others to

- alter this document in any way, or remove this Legal Notice from the attached standard;
- sell this document without authorization from CSA Group; or
- make an electronic copy of this document.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not load or use this document or make any copies of the contents hereof, and if you do make such copies, you are required to destroy them immediately. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



Standards Update Service

***CSA C22.2 No. 60335-2-12:20
November 2020***

Title: *Household and similar electrical appliances — Safety — Part 2-12: Particular requirements for warming plates and similar appliances*

To register for e-mail notification about any updates to this publication

- go to store.csagroup.org
- click on **Product Updates**

The **List ID** that you will need to register for updates to this publication is **128 01**.

If you require assistance, please e-mail techsupport@csagroup.org or call 416-747-2233.

Visit CSA Group's policy on privacy at www.csagroup.org/legal to find out how we protect your personal information.

Canadian Standards Association (operating as “CSA Group”), under whose auspices this National Standard has been produced, was chartered in 1919 and accredited by the Standards Council of Canada to the National Standards system in 1973. It is a not-for-profit, nonstatutory, voluntary membership association engaged in standards development and certification activities.

CSA Group standards reflect a national consensus of producers and users — including manufacturers, consumers, retailers, unions and professional organizations, and governmental agencies. The standards are used widely by industry and commerce and often adopted by municipal, provincial, and federal governments in their regulations, particularly in the fields of health, safety, building and construction, and the environment.

Individuals, companies, and associations across Canada indicate their support for CSA Group’s standards development by volunteering their time and skills to Committee work and supporting CSA Group’s objectives through sustaining memberships. The more than 7000 committee volunteers and the 2000 sustaining memberships together form CSA Group’s total membership from which its Directors are chosen. Sustaining memberships represent a major source of income for CSA Group’s standards development activities.

CSA Group offers certification and testing services in support of and as an extension to its standards development activities. To ensure the integrity of its certification process, CSA Group regularly and continually audits and inspects products that bear the CSA Group Mark.

In addition to its head office and laboratory complex in Toronto, CSA Group has regional branch offices in major centres across Canada and inspection and testing agencies in eight countries. Since 1919, CSA Group has developed the necessary expertise to meet its corporate mission: CSA Group is an independent service organization whose mission is to provide an open and effective forum for activities facilitating the exchange of goods and services through the use of standards, certification and related services to meet national and international needs.

For further information on CSA Group services, write to
CSA Group
178 Rexdale Boulevard
Toronto, Ontario, M9W 1R3
Canada



A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

Standards Council of Canada
600-55 Metcalfe Street
Ottawa, Ontario, K1P 6L5
Canada



Standards Council of Canada
Conseil canadien des normes

Cette Norme Nationale du Canada est disponible en versions française et anglaise.

Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

®A trademark of the Canadian Standards Association, operating as “CSA Group”

National Standard of Canada

CSA C22.2 No. 60335-2-12:20
Household and similar electrical
appliances — Safety — Part 2-12: Particular
requirements for warming plates and similar
appliances
(IEC 60335-2-12:2002+A1:2008+A2:2017, MOD)

Prepared by
International Electrotechnical Commission



Reviewed by



*A trademark of the Canadian Standards Association,
operating as "CSA Group"*



Published in November 2020 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3

To purchase standards and related publications, visit our Online Store at store.csagroup.org
or call toll-free 1-800-463-6727 or 416-747-4044.

ICS 13.120; 97.040.50
ISBN 978-1-4883-2998-2

© 2020 Canadian Standards Association
All rights reserved. No part of this publication may be reproduced in any form whatsoever
without the prior permission of the publisher.

CSA C22.2 No. 60335-2-12:20

Household and similar electrical appliances — Safety — Part 2-12: Particular requirements for warming plates and similar appliances

(IEC 60335-2-12:2002+A1:2008+A2:2017, MOD)

CSA Preface

This is the fourth edition of CSA C22.2 No. 60335-2-12, *Household and similar electrical appliances — Safety — Part 2-12: Particular requirements for warming plates and similar appliances*, which is an adoption, with Canadian deviations, of the identically titled IEC (International Electrotechnical Commission) Standard 60335-2-12 (edition 5:2002 consolidated with Amendment 1:2008 and Amendment 2:2017). It supersedes the previous edition published in 2013 as CAN/CSA-E60335-2-12 (adopted IEC 60335-2-12:2002+A1:2008), and it replaces the requirements for warming plates and similar appliances found in CSA C22.2 No. 64:19, *Household cooking and liquid-heating appliances*. CSA C22.2 No. 64 continues to apply to other cooking and liquid-heating appliances. This Standard is one in a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*.

For brevity, this Standard will be referred to as “CSA C22.2 No. 60335-2-12” throughout.

This Standard is intended to be used in conjunction with CAN/CSA-C22.2 No. 60335-1:16, *Household and similar electrical appliances — Safety — Part 1: General requirements* (adopted IEC 60335-1:2010+ A1:2013, with Canadian deviations).

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed for Canadian adoption by the CSA Technical Committee on Consumer and Commercial Products, under the jurisdiction of the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretation of standards under its jurisdiction: “The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant

CSA committee interpretation has not already been published, CSA Group's procedures for interpretation shall be followed to determine the intended safety principle.”

© 2020 Canadian Standards Association

All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission of the publisher. IEC material is reprinted with permission. Where the words “this International Standard” appear in the text, they should be interpreted as “this National Standard of Canada”.

Inquiries regarding this National Standard of Canada should be addressed to
CSA Group

178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3
1-800-463-6727 • 416-747-4000

www.csagroup.org

To purchase standards and related publications, visit our Online Store at store.csagroup.org or call toll-free 1-800-463-6727 or 416-747-4044.

This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. The technical content of IEC and ISO publications is kept under constant review by IEC and ISO. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include “proposal for change” in the subject line:

- a) Standard designation (number);
- b) relevant clause, table, and/or figure number;
- c) wording of the proposed change; and
- d) rationale for the change.

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	8
3 Definitions.....	8
4 General requirement.....	8
5 General conditions for the tests.....	8
6 Classification.....	9
7 Marking and instructions.....	8
8 Protection against access to live parts.....	9
9 Starting of motor-operated appliances.....	10
10 Power input and current.....	10
11 Heating.....	10
12 Void.....	11
13 Leakage current and electric strength at operating temperature.....	11
14 Transient overvoltages.....	11
15 Moisture resistance.....	12
16 Leakage current and electric strength.....	12
17 Overload protection of transformers and associated circuits.....	12
18 Endurance.....	13
19 Abnormal operation.....	13
20 Stability and mechanical hazards.....	13
21 Mechanical strength.....	13
22 Construction.....	14
23 Internal wiring.....	14
24 Components.....	14
25 Supply connection and external flexible cords.....	14
26 Terminals for external conductors.....	15
27 Provision for earthing.....	15
28 Screws and connections.....	15
29 Clearances, creepage distances and solid insulation.....	15
30 Resistance to heat and fire.....	15
31 Resistance to rusting.....	15
32 Radiation, toxicity and similar hazards.....	15
Annexes.....	16
Bibliography.....	16
Figure 101 – Probe for measuring surface temperatures.....	15
Table 101 – Maximum temperature rises of external accessible surfaces under normal operating conditions.....	11

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-12: Particular requirements for warming plates and similar appliances

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric warming plates, warming trays and similar appliances intended to keep food or vessels warm, for household and similar purposes, their **rated voltage** being not more than 250 V.

~~Appliances not intended for normal household use but that nevertheless may be a source of danger to the public, such as appliances intended to be used by laymen in shops, in light industry and on farms, are also within the scope of this standard.~~

Appliances intended for normal household and similar use and that may also be used by laymen in shops, in light industry and on farms are within the scope of this standard. However, if the appliance is intended to be used professionally to keep vessels warm or to process food for commercial consumption, the appliance is not considered to be for household and similar use only.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account

- ~~— the use of appliances by young children, or infirm persons without supervision;~~
- ~~— playing with the appliance by young children.~~

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

NOTE 101 Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or in aircraft, additional requirements may be necessary;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour and similar authorities.

NOTE 102 This standard does not apply to

- appliances made of flexible material, such as textile material;
- appliances intended exclusively to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- appliances intended exclusively for commercial catering or industrial purposes.