CAN/ULC-S102.4:2017 (R2022)

STANDARD METHOD OF TEST FOR FIRE AND SMOKE CHARACTERISTICS OF ELECTRICAL WIRING, CABLES AND NON-METALLIC RACEWAYS

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The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for the particular application.

Copies of this National Standard of Canada may be ordered from ULC Standards.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

Standard Method of Test for Fire and Smoke Characteristics of Electrical Wiring, Cables and Non-Metallic Raceways, CAN/ULC-S102.4

Fourth Edition, Dated September 1, 2017

Summary of Topics

This revision of CAN/ULC-S102.4 dated November 14, 2022 is being issued to update the title page to reflect the reaffirmation of this Fourth Edition National Standard of Canada. No changes in requirements are involved.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated May 18, 2022.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.

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CAN/ULC-S102.4:2017 (R2022)

STANDARD METHOD OF TEST FOR FIRE AND SMOKE CHARACTERISTICS OF ELECTRICAL WIRING, CABLES AND NON-METALLIC RACEWAYS

ICS 13.220.40, 19.040, 29.060

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PREFACE

This is the Fourth Edition of the Standard Method of Test for Fire and Smoke Characteristics of Electrical Wiring, Cables and Non-Metallic Raceways, CAN/ULC-S102.4.

This Edition of the Standard was developed by the ULC Standards Task Group on Surface Burning Characteristics and has been formally approved by the ULC Standards Committee on Fire Tests.

This Standard has been developed in compliance with the requirements of SCC for accreditation of a Standards Development Organization.

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

Appendix A, identified as Informative, are for information purposes only.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This Fourth Edition National Standard of Canada is based on, and now supersedes, the Third Edition.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. ULC Standards shall not be held responsible for identifying any or all such patent rights.

Requests for interpretation of this Standard should be sent to ULC Standards. The requests should be worded in such a manner as to permit a “yes” or “no” answer based on the literal text of the requirement concerned.

iThis CAN/ULC-S102.4 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com/canada.

This Standard is intended to be used for conformity assessment.

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1 SCOPE

1.1 This test method is for use in determining values of flame propagation distance and smoke optical density for electrical and optical-fibre cables and non-metallic raceways that are to be installed in ducts, plenums, and other spaces used for environmental air. It is not intended for use with cables enclosed in metallic raceways in those spaces. This method also determines values of flame propagation distance and smoke optical density for electrical and optical-fibre cables with combustible jackets or sheathes, and non-metallic raceways to determine their acceptability for use in buildings of non-combustible construction.

1.2 Although this method utilizes similar test apparatus as in CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Material and Assemblies, changes have been made to the test furnace such that a test conducted in the apparatus used for this Standard shall not be considered identical or provide comparable results.

1.3 This test method does not cover the construction requirements for cables and non-metallic raceways or their electrical and other performance requirements.

2 REFERENCE PUBLICATIONS

2.1 The documents shown below are referenced in the text of this Standard. Unless otherwise stated elsewhere in this Standard such reference shall be considered to indicate the edition and/or revisions of the document available at the date on which the Committee approved this ULC Standard.

Documents Published by CSA Group
178 Rexdale Boulevard, Toronto, Ontario M9W 1R3 Canada
Telephone: (416) 747-4000 or 1-800-463-6727
www.csagroup.org

• CSA C22.2 No. 0.3-09 (R2014), Test Methods for Electrical Wires and Cables

• CAN/CSA C22.2 No.262-04 (R2013), Optical Fiber Cable and Communication Cable Raceway Systems

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Document Published by the National Fire Protection Association (NFPA)
1 Batterymarch Park, P.O. Box 9101, Quincy, MA, 2269-9101 U.S.A.
Telephone: (617) 770-3000
www.nfpa.org

• NFPA 262-15, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces

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Documents Published by ULC Standards (prior to May, 2010, identified as Underwriters Laboratories of Canada)
171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada
Telephone: (613) 755-2729
www.ulc.ca/ulcstandards

• CAN/ULC-S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

• CAN/ULC-S114-05, Standard Method of Test for Determination of Non-Combustibility in Building Materials

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