CAN/ULC 102.2:18 (R2024)

Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies

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SCC CCN

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Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies, CAN/ULC 102.2

Eighth Edition, Dated June 1, 2018

Summary of Topics

This revision of CAN/ULC-S102.2 dated June 3, 2024 is being issued to update the title page to reflect the reaffirmation of this Eighth Edition National Standard of Canada. No changes in requirements are involved.

Text that has been changed in any manner or impacted by ULSE'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 January 31, 2024.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD.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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Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies

ICS 13.220.40; 13.220.50; 19.040; 91.180

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PREFACE

This is the Eighth Edition of the Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies, CAN/ULC 102.2.

This Edition of the Standard 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 and B, identified as informative, are for informational 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 Eighth Edition National Standard of Canada is based on, and now supersedes, the Seventh 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.

This CAN/ULC 102.2 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 Collaborative Standards Development System (CSDS) at https://csds.ul.com.

This Standard is intended to be used for conformity assessment.

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1 SCOPE

1.1 This Standard is applicable to the finished surface or covering of a floor extending to a maximum depth of 65 mm. This method is also applicable to the following:

A Materials which cannot be tested as described in Clause 1.1 of CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies, without the use of supporting material that is not representative of the intended installation;

B Materials which, when tested in the manner described in Clause 1.1 of CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies, melts or drips, or otherwise disintegrates and continues to burn on the floor of the test chamber;

C Materials designed for use in a relatively horizontal position with only its top surface exposed to air; or

D Thermoplastic materials.

1.2 Where a material cannot be readily determined to be thermoplastic or thermoset, one test is conducted in accordance with this standard and one additional test in conformance with requirements of CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies. Triplicate testing shall then be conducted and reported using the method that produces the highest Flame Spread Value (FSV).

1.3 The primary purpose of this Standard is to determine the comparative burning characteristics of the material or assembly under test by evaluating the flame spread over its surface when exposed to a test fire and thus establish a basis on which surface burning characteristics of different materials or assemblies may be compared, without specific considerations of all the end-use parameters that might affect these characteristics.

1.4 Smoke Developed Value (SDV) and Flame Spread Value (FSV) are recorded in this Standard. There is not necessarily a relationship between these two measurements.

1.5 It is the intent of this Standard to register performance during the period of exposure, and not to determine suitability for use after the test exposure.

1.6 This method does not establish standards of performance for specific applications. It is a means of evaluating the response of materials, products or assemblies to a particular fire exposure under controlled laboratory conditions.

1.7 Durability requirements, as a product of exposure and influence (if any) due to environmental conditions or climate change, are outside the scope of this standard. (Refer to Appendix B).

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 the American Society for Testing and Materials (ASTM International)
100 Barr Harbour Drive, PO Box C700, West Conshohocken, PA 19428-2959 U.S.A.
Telephone: (610) 832-9585
www.astm.org

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• ASTM D4442-16, Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials

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Documents Published by ULC Standards
171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada
Telephone: 613-755-2729
www.ulc.ca/ulcstandards

• CAN/ULC-S102:2018, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
• CAN/ULC-S114:2018, Standard Method of Test for Determination of Non-Combustibility in Building Materials.

3 SIGNIFICANCE

3.1 This method defines the relative surface burning characteristics under specific test conditions. Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions.

3.2 The "fire hazard" of any material in the light of present knowledge cannot be evaluated on the basis of any one test. A body of tests, each measuring one or more characteristics of a material, product, or assembly, may be needed for full assessment. These assessments are intended as aids to those who have the responsibility for determining acceptable levels of potential hazard. The overall fire hazard of a material as it is to be used can only be determined by an analysis of its behaviour under several test conditions in addition to a further analysis which includes consideration of building construction, occupancy, location, and fire protection features.

4 GLOSSARY

NOTE: Terms used in this Standard are defined as follows:

4.1 FLAME SPREAD RATING (FSR) – A number derived from the average of a minimum of three ‘flame spread values’

4.2 FLAME SPREAD VALUE (FSV) – A number indicating a comparative measure derived from observations made during the progress of the boundary of a zone of flame during the test for surface burning characteristics

4.3 SMOKE DEVELOPED CLASSIFICATION (SDC) – A number derived from the average of a minimum of three ‘smoke developed values’

4.4 SMOKE DEVELOPED VALUE (SDV) – A number indicating a comparative measure derived from smoke obscuration data collected during the test for surface burning characteristics

4.5 TEST SPECIMEN – Representative piece of the product which is to be tested together with any substrate or treatment

Note: the test specimen may include an air gap

4.6 THERMOPLASTIC – For the purpose of this Standard, a material that is plastic or deformable, and which melts or drips when heated

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