CAN/ULC 107:2019 (R2024)

Standard Methods of Fire Tests of Roof Coverings

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

Standard Methods of Fire Tests of Roof Coverings, CAN/ULC 107

Fourth Edition, Dated March 28, 2019

Summary of Topics

This revision of CAN/ULC 107 dated July 22, 2024 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 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PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD.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 Methods of Fire Tests of Roof Coverings

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This list represents the membership at the time the Committee balloted on the final text of this edition. Since that time, changes in the membership may have occurred.

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PREFACE

This is the Fourth Edition of the Standard Methods of Fire Tests of Roof Coverings, CAN/ULC 107.

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.

Annex A, identified as informative, is 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 Fourth Edition of this 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.

This CAN/ULC 107 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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INTRODUCTION

1 Scope

1.1 The test methods described in this Standard are applicable to roof covering materials and are intended to measure the relative fire-performance characteristics of roof coverings when exposed to fire originating from sources outside a building on which they may be installed. They are applicable to roof coverings intended for installation on either combustible or non-combustible decks when applied as intended for use. The following test methods are included:

a) Intermittent-Flame Test;

b) Spread-of-Flame Test;

c) Burning-Brand Test;

d) Flying-Brand Test;

e) Rain Test; and

f) Weathering Test.

1.2 Three classes of fire test exposure are described in Clauses 1.3 through 1.5.

1.3 Class A Tests are applicable to roof coverings that are effective against severe fire exposures, are not readily flammable, afford a fairly high degree of fire protection to the roof deck, do not slip from position and are not expected to produce flying brands.

1.4 Class B Tests are applicable to roof coverings that are effective against moderate fire exposures, are not readily flammable, afford a moderate degree of fire protection to the roof deck, do not slip from position and are not expected to produce flying brands.

1.5 Class C Tests are applicable to roof coverings that are effective against light fire exposures, are not readily flammable, afford a measurable degree of fire protection to the roof deck, do not slip from position and are not expected to produce flying brands.

1.6 It is the intent that the classifications indicate performance during tests of the types of materials and periods of exposure involved, and should not be construed as having any significance with respect to the suitability for use after fire exposure

1.7 Roof covering materials are required to comply also with other requirements for construction, material specifications, and performance as applicable to specific types, designs, sizes and arrangements. All such additional requirements are not considered to be within the scope of these requirements for fire tests.

1.8 Durability requirements, as a product of exposure and influence (if any) due to climate change, are outside the scope of this standard. (Refer to Annex A).

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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.

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

• ASTM D2898-09, Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing

3 Test Apparatus

3.1 Figure 3.1 illustrates the essential elements of the fire-test apparatus. It consists of a test deck (A) an adjustable framework (B) on which the test deck is mounted at the desired incline, a gas burner (C) as a source of flame for intermittent-flame, spread-of-flame, and flying-brand tests, an air duct (D) and non-combustible boards (E) extending from the sides and bottom of the air duct to the simulated eaves or cornice of the adjustable framework that supports the test deck. Additional equipment consists of gas burners for pre-igniting the burning brands, a gas pressure gauge, an adjustable air supply, an air velocity meter, a gas control valve and a stopwatch.

3.2 The tests are to be conducted in a room vented to the outer air in such a manner that the outside weather cannot affect the test results. Tests are not to be conducted if the room temperature is below 10 °C or above 32 °C.

3.3 Figure 3.2 illustrates the essential elements of the rain-test apparatus.

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