CAN/ULC 114:2018 (R2024)

Standard Method of Test for Determination of Non-Combustibility in Building Materials

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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 Determination of Non-Combustibility in Building Materials, CAN/ULC 114

Fourth Edition, Dated June 1, 2018

Summary of Topics

This revision of CAN/ULC 114 dated August 30, 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 June 5, 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PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD.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 Determination of Non-Combustibility in Building Materials

ICS 13.220.50

ULC Standards
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SCC CCN

First Edition . . . . . April 1978
Second Edition . . . . . December 1980
Third Edition . . . . . July 2005
FOURTH EDITION . . . . . JUNE 1, 2018
REAFFIRMED . . . . . AUGUST 30, 2024

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ULC Standards

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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 Method of Test for Determination of Non-Combustibility in Building Materials, CAN/ULC 114.

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, 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 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 114 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 provides a means of determining the non-combustible nature of elementary building materials. It shall be applied to materials used in the construction of buildings. It does not apply to materials with a decorative or protective coating, or impregnation, or built up of laminations of dissimilar materials. (Adhesives between laminations shall be considered laminations.)

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

• ULC-S135-04-AM1 (R2016), Standard Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter)

3 Apparatus

3.1 The test shall be carried out in the furnace detailed in Figure 1 through Figure 5. This furnace shall be heated by passing an electric current from a suitably regulated source through the nickel-chrome resistance wire surrounding the heating tube. The electric current may be adjusted by means of a variable voltage transformer.

3.2 Temperatures in the furnace shall be determined by two chromel-alumel thermocouples. The controlling thermocouple T_2, situated at the level of the centre of the specimen and 9.5 mm from the wall of the heating tube, shall be used when stabilizing the furnace temperature prior to test; the indicating thermocouple T_1, situated above the specimen and 6.4 mm inside the gas vent, shall be used to measure the temperature rise during the combustion of the specimen. The wires of both thermocouples shall have a diameter not greater than 1 mm and that portion of their length which protrudes inside the combustion chamber shall be bared. For the measurement of temperatures, preference should be given to an automatic recording device.

3.3 A mirror may be used to make visual observations of the specimen during the test.

4 Test Specimens

4.1 All specimens shall be 38 mm wide by 38 mm thick in a cross-section perpendicular to the axis of the furnace, and 50 mm long. Tolerances in each dimension shall be ± 2 mm.

4.2 Specimens of materials which are normally less than 38 mm thick shall be made of sufficient layers to achieve a final thickness that conforms with the limit specified in Clause 4.1, and layers of materials shall be tied together with a wire capable of withstanding the temperature of the furnace. If, to obtain a thickness of 38 mm, a layer shall be cut, only the normal surface of the sample shall form the outside face of the specimen.

4.3 If the specimen is likely to disintegrate or melt during the test it shall be supported in a metal gauze, or thin sheet-metal dish respectively, having a base of 40 mm by 40 mm and a height of 50 mm. The metal chosen shall be capable of withstanding the temperature of the furnace.

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