CAN/ULC-S145:2018 (R2023)

STANDARD METHOD OF TEST FOR THE EVALUATION OF PROTECTIVE COVERINGS FOR FOAMED PLASTIC INSULATION – FULL-SCALE ROOM TEST

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Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic Insulation – Full-Scale Room Test, CAN/ULC-S145

First Edition, Dated June 30, 2018

Summary of Topics

This revision of CAN/ULC-S145 dated August 31, 2023 is being issued to update the title page to reflect the reaffirmation of this First 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 May 5, 2023.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD.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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FIRST EDITION . . . . . **JUNE 30, 2018**
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PREFACE

This is the First Edition of the Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic Insulation – Full-Scale Room Test, CAN/ULC-S145.

This Edition of the Standard was developed by the ULC Standards Task Group on Combustibility 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, 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. 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-S145 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 The purpose of this test method is to determine the contribution to fire growth of protective coverings over foamed plastic insulation when tested in a Full-Scale Room Test in accordance with CAN/ULC-9705, Fire Tests – Full-Scale Room Test for Surface Products, except as specified in this Standard.

1.2 This test method measures the time to flashover under specified test conditions. Provisions are made to measure smoke obscuration, rate of fire growth and rate of heat release of the protective covering and foamed plastic insulation room lining.

1.3 This test method is not intended to determine the fire resistance rating of wall or ceiling assemblies lined with foamed plastic insulation and a protective covering. In addition, this test method does not identify which products of combustion, nor risks associated with products of combustion.

1.4 This test method provides for classifications of 10 min and 20 min, which are not equivalent to classifications prescribed in CAN/ULC-S124, Standard Method of Test for the Evaluation of Thermal Barriers for Foamed Plastic.

Note: See Appendix A for information on the differences between this Standard and CAN/ULC-S124, Standard Method of Test for the Evaluation of Thermal Barriers for Foamed Plastic.

1.5 The exposure test, as described herein, is not intended to be representative of all fire conditions. It is likely that conditions will vary with changes in the amount, nature and distribution of fire loading, ventilation, size and configuration of the assembly installed. These requirements provide a relative measure of the fire performance of comparable assemblies under these specified fire exposure conditions.

1.6 This Standard is used to measure and describe the response of materials, products or assemblies to heat and flame under controlled conditions.

1.7 This Standard includes classifications based on the use of a Full-Scale Room test in accordance with CAN/ULC-9705, Fire Tests – Full-Scale Room Test for Surface Products, but as specified in this Standard.

1.8 It is the intent that classifications shall register performance during a period of exposure and shall not be construed as determining suitability for use after fire exposure.

1.9 The intent of this standard is to evaluate specific combinations of protective materials and foamed plastic insulation as individual systems.

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 National Fire Protection Association (NFPA)
1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101 U.S.A.
Telephone: (617) 770-3000; Fax: (617) 770-3500
www.nfpa.org

• NFPA 286-2015, Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth

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1200 Montreal Road, Bldg. M-23A, Ottawa, ON K1A 0R6 Canada
Telephone: (613) 993-9960 or 1-800-672-7990
www.nrc-cnrc.gc.ca

• National Building Code of Canada, 2015

Documents Published by ULC Standards
Telephone: (613) 755-2729
www.ulc.ca/ulcstandards

• CAN/ULC-S101-14, Standard Methods of Fire Endurance Tests of Building Construction and Materials

• CAN/ULC-S124:2018, Standard Method of Test for the Evaluation of Thermal Barriers for Foamed Plastic

• CAN/ULC-S704-11, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced

• CAN/ULC-9705-13 (R2018), Fire Tests – Full-Scale Room Test for Surface Products

3 TEST SPECIMEN

3.1 GENERAL

3.1.1 The protective covering material, the foamed plastic insulation, any adhesives and the method of securing the protective covering shall be representative of the construction for which classification is required.

3.1.2 If the protective covering material incorporates joints, at least one such joint shall be incorporated on each wall and ceiling. In addition to any corner joint, one vertical panel joint shall be located adjacent to and in contact with the ignition burner.

3.2 FOAMED PLASTIC INSULATION

3.2.1 General

3.2.1.1 The type and thickness of foamed plastic insulation shall be that for which classification is required.

3.2.1.2 The thickness of the foamed plastic insulation shall be the maximum for which classification is required, excepting that it need not exceed 100 mm.

3.2.1.3 The foamed plastic insulation shall be attached or installed to the interior surface of the room. The foamed plastic insulation shall be installed on the ceiling and on the three walls not containing the doorway.

3.3 SUPPORTING CONSTRUCTION

3.3.1 For the Full-Scale Room Test, the supporting construction shall consist of a wood- or steel-frame room lined with gypsum board on the interior surface. The room size shall be adjusted based on the thickness of the foamed plastic insulation and protective covering, in order to satisfy the interior room dimensions described in CAN/ULC-9705, Fire Tests – Full-Scale Room Test for Surface Products (see FIGURE 1).

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