CAN/ULC 511:2014 (R2024)

Standard for Lined Fire Hose for Interior Standpipes and Municipal and Industrial Fire Protection Services

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Standard for Lined Fire Hose for Interior Standpipes and Municipal and Industrial Fire Protection Services, CAN/ULC 511

Sixth Edition, Dated December 1, 2014

Summary of Topics

This revision of CAN/ULC 511 dated July 26, 2024 is being issued to update the title page to reflect the reaffirmation of this Sixth 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 17, 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PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD.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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CAN/ULC 511:2014 (R2024)

Standard for Lined Fire Hose for Interior Standpipes and Municipal and Industrial Fire Protection Services

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ULC STANDARDS COMMITTEE ON FIRE PROTECTION EQUIPMENT AND SYSTEMS

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Burridge, A.	Ajax Fire & Emergency Services	Authorities Having Jurisdiction / Regulator	Ontario
Darley, P.	Miami Beach Fire Department	Authorities Having Jurisdiction / Regulator	USA
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Lapointe, F.	Ministère de la Sécurité Publique	Government	Québec
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Sethuraman, V.	Profire Safety Consultants	General Interest	United Arab Emirates
Suche, R.	Fire Apparatus Manufacturer's Association	Producer	USA
Tiller, D.	Office of the Fire Marshal	Regulator	Ontario

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 Sixth Edition of the Standard for Lined Fire Hose for Interior Standpipes and Municipal and Industrial Fire Protection Services, CAN/ULC 511.

This Edition of the Standard has been formally approved by the ULC Standards Committee on Fire Protection Equipment and Systems.

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 Sixth Edition National Standard of Canada is based on, and now supersedes, the Fifth 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 511 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 These requirements apply to single and multiple jacketed lined fire hose of the following nominal inside diameter trade sizes: 38, 45, 50, 65, 77, 89, 100, 125 and 150 mm (1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, and 6 inch).

1.2 These requirements do not cover couplings nor their method of attachment.

1.3 Single jacketed hose, intended for service test pressures of 1035, 1380, or 1725 kPa, is primarily intended for use on fire hydrants, interior standpipes, and similar places. They are not intended for hard usage and are not suitable where the hose will be subjected to chafing on rough or sharp surfaces.

1.4 38 and 65 mm interior standpipe hose sizes are intended:

A To be installed in accordance with the Standard for the Installation of Standpipe and Hose Systems, NFPA 14;

B For use on hose racks and reels and in cabinets where the specific combination of hose and rack, reel, or cabinet has been investigated and found acceptable; and

C To withstand infrequent service.

NOTES:

1 The 38 mm size hose is intended for use primarily by the building occupants for the control of incipient fires until the arrival of the fire department as defined under Class II service of NFPA 14.

2 The 65 mm size hose in intended for use by fire departments and those trained in handling large water streams required during the more advance stages of fire on the inside of buildings or for exposure fire protection as defined under Class I service of NFPA 14.

1.5 Multiple jacketed hose or covered hose judged equivalent to multiple-jacketed hose, intended for service test pressures of 1380, 2070, or 2760 kPa, is primarily intended for use on fire department apparatus and in places where service conditions require additional protection against wear afforded by the extra woven jacket or cover.

1.6 Hoses covered by these requirements are intended to be periodically inspected and maintained while in service, in accordance with the Standard for the Care, Use, Inspection, Service Testing, and Replacement Care, and Use of Fire Hose, Couplings and Nozzles, and the Service Testing of Fire Hose Appliances, NFPA 1962.

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)
100 Barr Harbour Drive, PO Box C700, West Conshohocken, PA 19428-2959 U.S.A.
Telephone: (610) 832-9585
www.astm.org

• ASTM D 297-13, Standard Test Methods for Rubber Products – Chemical Analysis

• ASTM D 412 REV A-06 (R 2013), Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension

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• ASTM D 471 REV A-12, Standard Test Method for Rubber Property – Effect of Liquids

• ASTM D 573-04 (R2010), Standard Test Method for Rubber – Deterioration in an Air Oven

• ASTM D 1149-07 (R2012), Standard Test Method For Rubber Deterioration – Cracking in an Ozone Controlled Environment

• ASTM D 3183-10, Standard Practice for Rubber – Preparation of Pieces for Test Purposes from Products

• ASTM E 145-94 (R2011), Standard Specification for Gravity-Convection and Forced-Ventilation Ovens

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Documents published by the National Fire Protection Association (NFPA)
1 Batterymarch Park, P.O. Box 9101, Quincy, MA, U.S.A. 02269-9101
Telephone 1-800-668-2955
www.nfpa.org

• NFPA 14, Standard for the Installation of Standpipe and Hose Systems, 2012 Edition

• NFPA 1962, Standard for the Care, Use, Inspection, Service Testing, and Replacement Care, and Use of Fire Hose, Couplings and Nozzles, and the Service Testing of Fire Hose Appliances, 2013 Edition

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3 GLOSSARY

Note: Terms used in this Standard that are in *italic* print are defined as follows:

3.1 *FILLER THREADS* — The thread or yarns of the jacket or reinforcement that are helically wound throughout the length of the hose at approximately right angles to the warp threads.

3.2 *PROOF PRESSURE* — WARP THREADS – The threads or yarns of the jacket or reinforcement that run lengthwise to the hose.

3.3 *SERVICE TEST PRESSURE* — The pressure at which the hose is periodically tested to determine that it can remain in service. It equals 1.1 times the maximum normal highest operating pressure.

3.4 *WARP THREADS* The threads or yarns of the jacket or reinforcement that run lengthwise to the hose.

4 CONSTRUCTION

4.1 JACKET AND INNER REINFORCEMENTS

4.1.1 The jacket shall be evenly and firmly woven, and free from visible defects, thread knots, lumps, and irregularities of twist. The threads shall be continuous, and any knots in the filler threads shall be tucked under the warp threads.

4.1.2 The jacket shall be seamless and shall have the fillers woven around the hose throughout its length and the warps interwoven with the fillers. The jacket for hose other than for standpipes may be made with a cover over the woven jacket.

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