CAN/ULC 518:2011 (R2024)

Standard for Cotton-Synthetic Non-Percolating Forestry Hose

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The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for the particular application.

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 for Cotton-Synthetic Non-Percolating Forestry Hose, CAN/ULC 518

Second Edition, Dated March 1, 2011

Summary of Topics

This revision of CAN/ULC 518 dated July 8, 2024 is being issued to update the title page to reflect the reaffirmation of this Second 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 April 19, 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PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD.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 518:2011 (R2024)

Standard for Cotton-Synthetic Non-Percolating Forestry Hose

ICS 13.220.20, 23.040.70, 65.060.80

First Edition . . . . . August 1990
SECOND EDITION . . . . . MARCH 2011
Reaffirmed . . . . . June 2018
REAFFIRMED . . . . . JULY 8, 2024

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ULC STANDARDS COMMITTEE ON FIRE PROTECTION EQUIPMENT AND SYSTEMS

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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 Second Edition of the Standard for Cotton-Synthetic Non-Percolating Forestry Hose, CAN/ULC 518.

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.

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 Second Edition National Standard of Canada is based on, and now supersedes, the First 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 518 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 applies to woven-jacketed, lined, cotton-synthetic non-percolating forestry hose which contain non-synthetic fibres of the sizes commercially known as 25 mm and 38 mm having a minimum *service test pressure* of 2070 kPa, suitable for use in forest fire suppression.

1.2 The hose shall be lined and shall decrease friction loss compared with unlined hose.

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

• ASTM D297-93 (R2006), Standard Test Methods for Rubber Products Chemical Analysis

• ASTM D518-99, Standard Test Method for Rubber Deterioration – Surface Cracking

• ASTM D573-04, Standard Test Method for Rubber – Deterioration in an Air Oven

• ASTM D1149-07, Standard Test Method For Rubber Deterioration – Surface Ozone Cracking in a Chamber

• ASTM D3183-07, Standard Practice for Rubber – Preparation of Pieces for Test Purposes from Products

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Documents Published by the Canadian General Standards Board (CGSB)
Canadian General Standards Board, Gatineau, QC K1A 1G6 Canada
Telephone: (819) 956-0425 or 1-800-665-2472
www.pwgsc.gc.ca/cgsb

• CAN/CGSB-4.2 – 28.4-M91,Textile Text Methods – Resistance to Micro-Organisms – Fungus Damage Test – Pure Culture – Qualitative

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•CAN/ULC-S513-11, Standard for Threaded Couplings for 38 mm and 65 mm Fire Hose

• CAN/ULC-S551-95, Standard for Forged External-Lug Quick-Connect Couplings and Adapters for Forestry Fire Hose

• CAN/ULC-S558-95, Standard for External-Lug Quick-Connect Couplings and Adapters for Forestry Fire Hose

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3 GLOSSARY

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

BURST RESISTANCE PRESSURE – The pressure which all hoses must resist prior to bursting. It equals 2.5 times the *service test pressure*.

KINK PRESSURE – The pressure used for the kink test. It equals 1.5 times the *service test pressure*.

OPERATING PRESSURE – The pressure at which the hose is designed to be used.

PROOF PRESSURE – The pressure applied to new production hoses to indicate their acceptability at the intended *operating pressure*. It equals 2 times the *service test pressure*.

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 *operating pressure*.

4 CONSTRUCTION

4.1 JACKET

4.1.1 The hose jacket shall be woven from first quality yarns suitable for the purpose, which shall be virtually free from knots, shives, and other imperfections. The fabric shall be of uniformly even and firm texture and shall be free from all defects that might affect serviceability.

4.1.2 The fabric shall be seamless and the warp yarns shall cover the weft yarns sufficiently to protect them from abrasion.

4.2 LINING

4.2.1 The lining shall decrease friction loss compared with unlined hose.

4.2.2 The lining shall consist of natural rubber and/or a synthetic compound, or fabric-reinforced natural or synthetic latex laminated to the inner circumference of the hose. The lining shall be free from pits and other manufacturing imperfections, and shall have a smooth interior surface except for unevenness due to the weave. The entire lining shall adhere to the jacket when tested as described in Clause 4.2.3.

4.2.3 Hose that has been subjected to the pressure test and the heat resistance test shall be cut in lengths of at least 150 mm, and visually examined for bonding of the lining while being flexed manually. Twelve samples taken equally from an original 3 m of continuous length shall be examined. Not more than one defect shall be permitted. A single separation showing on the two ends resulting from one cut is defined as one defect. Pieces are not to be cut from the hose in the area where the hot block was placed.

5 REQUIREMENTS FOR FINISHED HOSE

NOTE: The hose should be placed in a suitable enclosure during testing to protect the operator when pressures greater than 2070 kPa are required.

5.1 MASS

5.1.1 The hose, exclusive of fittings, shall have a mass not more than 164 g/m for the 25 mm size and 225 g/m for the 38 mm size when conditioned at a relative humidity of 65 ± 2% and at a temperature of 21 ± 1°C for 24 h.

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