

**CAN/ULC-S675.2-14-REV1  
(Including Revision 1)**

**STANDARD FOR NONVOLUMETRIC PRECISION LEAK  
DETECTION DEVICES FOR UNDERGROUND AND  
ABOVEGROUND STORAGE TANKS AND PIPING FOR  
FLAMMABLE AND COMBUSTIBLE LIQUIDS**



**ULC Standards**  
Normes ULC



**Standards Council of Canada**  
**Conseil canadien des normes**



**Documents**

Document Sharing Hub

Underwriters Laboratories of Canada (ULC) was established in 1920 by letters patent issued by the Canadian Government. It maintains and operates laboratories and certification services for the examination, testing and certification of appliances, equipment, materials, constructions and systems to determine their relation to life, fire and property hazards as well providing inspection services.

Underwriters Laboratories of Canada is accredited by the Standards Council of Canada as a Certification Organization, a Testing Organization, and an Inspection Body under the National Standards System of Canada.

ULC Standards develops and publishes standards and other related publications for building construction, security and burglar protection, environmental safety, electrical equipment, fire protection equipment, gas and oil equipment, thermal insulation products, materials and systems, energy use in the built environment and electrical utility safety.

ULC Standards is a not-for-profit organization and is accredited by the Standards Council of Canada as a Standards Development Organization.

National Standards of Canada developed by ULC Standards conform to the criteria and procedures established by the Standards Council of Canada. Such standards are prepared using the consensus principle by individuals who provide a balanced representation of interests relevant to the subject area on a national basis.

ULC is represented across Canada as well as many countries worldwide. For further information on ULC services, please contact:

Customer Service: 1-866-937-3852

## National Standard of Canada

A National Standard of Canada is a standard developed by an SCC-accredited Standards Development Organization (SDO), and approved by the Standards Council of Canada (SCC), in accordance with SCC's: *Requirements and Guidance-Accreditation for Standards Development Organizations*, and *Requirements and Guidance-Approval of National Standards of Canada Designation*. More information on National Standard requirements can be found at [www.scc.ca](http://www.scc.ca).

An SCC-approved standard reflects the consensus of a number of experts whose collective interests provide, to the greatest practicable extent, a balance of representation of affected stakeholders. National Standards of Canada are intended to make a significant and timely contribution to the Canadian interest.

SCC is a Crown corporation within the portfolio of Industry Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts. Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at [www.scc.ca](http://www.scc.ca).

Users should always obtain the latest edition of a National Standard of Canada from the standards development organization responsible for its publication, as these documents are subject to periodic review.

### CORPORATE HEADQUARTERS

Underwriters Laboratories of Canada  
7 Underwriters Road  
Toronto, Ontario M1R 3A9  
Telephone: (416) 757-3611  
Fax: (416) 757-9540

### REGIONAL OFFICES

#### PACIFIC OFFICE

13775 Commerce Parkway, Suite 130  
Richmond, British Columbia V6V 2V4  
Telephone: (604) 214-9555  
Fax: (604) 214-9550

#### EASTERN OFFICE

6505, Rte Transcanadienne, Suite 330  
St-Laurent, Québec H4T 1S3  
Telephone: (514) 363-5941  
Fax: (514) 363-7014

For further information on ULC standards, please contact:

### ULC STANDARDS

171 Nepean Street, Suite 400  
Ottawa, Ontario K2P 0B4  
Telephone: (613) 755-2729  
Fax: (613) 231-5977  
E-mail: [customerservice@ulc.ca](mailto:customerservice@ulc.ca)  
Web site: [www.ulc.ca](http://www.ulc.ca)

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 Nonvolumetric Precision Leak Detection Devices for Underground and Aboveground Storage Tanks and Piping for Flammable and Combustible Liquids, CAN/ULC-S675.2-14-REV1

First Edition, Dated October 2014

### **Summary of Topics**

***The October 2017 revision of CAN/ULC-S675.2-14 contains the following changes in requirements:***

#### ***1. Revised Reference Publication Dates in Section 2.***

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated August 30, 2017.

A “(REV1)” marker in Bold will be inserted at the start of the applicable Clause(s) and in the applicable Subsection title(s). The Subsection title markers will appear in the TOC as a result. The markers may be found by searching for the characters “(REV1)”. Including the parenthesis in the search term will find the markers, without also finding every page header.

**PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.**

Comments, or proposals for revisions on any part of this Standard, may be submitted to ULC Standards at any time. Proposals should be submitted via a Proposal Request in ULC Standards’ on-line Collaborative Standards Development System (CSDS) at <https://csds.ul.com/canada>.

No Text on This Page

**STANDARD FOR NONVOLUMETRIC PRECISION LEAK DETECTION  
DEVICES FOR UNDERGROUND AND ABOVEGROUND STORAGE  
TANKS AND PIPING FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS**

ICS 75.180.01; 75.200

Prepared and Published by



Approved by



**FIRST EDITION** .....**OCTOBER 2014**  
**REVISION 1** .....**OCTOBER 2017**

*Copyright © 2017*

ULC Standards

All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior permission.



## TABLE OF CONTENTS

|                                                                                  |  |
|----------------------------------------------------------------------------------|--|
| ULC STANDARDS COMMITTEE ON FITTINGS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS ..I    |  |
| ULC STANDARDS TASK GROUP ON NONVOLUMETRIC PRECISION LEAK DETECTION .....II       |  |
| PREFACE .....III                                                                 |  |
| 1 SCOPE .....1                                                                   |  |
| 2 (REV1) REFERENCE PUBLICATIONS .....1                                           |  |
| 3 GLOSSARY .....4                                                                |  |
| 4 MATERIALS, WORKMANSHIP AND CONSTRUCTION .....5                                 |  |
| 4.1 GENERAL .....5                                                               |  |
| 4.2 ELECTRICAL FEATURES .....5                                                   |  |
| 4.2.1 General .....5                                                             |  |
| 4.3 NONMETALLIC MATERIALS .....6                                                 |  |
| 5 PERFORMANCE REQUIREMENTS .....6                                                |  |
| 5.1 PRECISION LEAK DETECTION .....6                                              |  |
| 6 PERFORMANCE TESTS .....6                                                       |  |
| 6.1 GENERAL .....6                                                               |  |
| 6.2 ACCELERATED AGING TEST .....6                                                |  |
| 6.3 EXTERNAL LEAKAGE TEST .....6                                                 |  |
| 6.4 REPORTING REQUIREMENTS, EXCLUDING LEAK DETECTION .....7                      |  |
| 6.4.1 General .....7                                                             |  |
| 6.5 LEAK DETECTION PERFORMANCE TESTS .....7                                      |  |
| 6.5.1 Leak Detection Performance Test Requirements .....7                        |  |
| 6.5.2 Reporting Requirements for Leak Detection Tests .....11                    |  |
| 7 INSTALLATION AND OPERATING INSTRUCTIONS .....11                                |  |
| 8 MARKING .....11                                                                |  |
| APPENDIX A - ACOUSTICAL METHODS AND TRACER METHODS (INFORMATIVE) .....13         |  |
| APPENDIX B - PROCESS OF CERTIFICATION AGAINST THE STANDARD (INFORMATIVE) .....15 |  |

AVADocuments.com

## ULC STANDARDS COMMITTEE ON FITTINGS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

| NAME                               | AFFILIATION                                | REGION                    | CATEGORY         |
|------------------------------------|--------------------------------------------|---------------------------|------------------|
| M. Mailvaganam(Chair)              | Consultant                                 | Ontario                   | General Interest |
| B. Andrew                          | Veeder-Root                                | U.S.A.                    | Producer         |
| B. Armstrong                       | AT Monitors                                | U.S.A.                    | Producer         |
| A. Barker                          | Technical Standards & Safety Authority     | Ontario                   | Regulator        |
| M. Bishoff                         | Lorax Systems, Inc.                        | Canada                    | Producer         |
| W. Boyd                            | Emco Wheaton Retail Corp.                  | U.S.A.                    | Producer         |
| A. Dornan                          | Environment Canada                         | Canada                    | Regulator        |
| J. Dutton                          | Department of Environment and Conservation | Newfoundland and Labrador | Regulator        |
| D. Edgecombe                       | Petroleum Tank Management Association      | Alberta                   | Regulator        |
| E. Fernandes                       | Ontario Petroleum Contractors Association  | Ontario                   | User             |
| S. Hyde-Clarke                     | National Research Council                  | Canada                    | General Interest |
| S. Jones                           | J and B Engineering, Inc.                  | Canada                    | General Interest |
| P. Legault                         | Department of National Defence             | Canada                    | Regulator        |
| D. Lenart                          | Imperial Oil (Esso)                        | Canada                    | User             |
| B. Nelson                          | Franklin Fueling Systems, Inc.             | U.S.A.                    | Producer         |
| G. Nikolic                         | MHCC Consultants, Inc.                     | Ontario                   | General Interest |
| D. Northcotte                      | North Waterloo Farmers Mutual Insurance    | Ontario                   | General Interest |
| R. Stephenson                      | Chevron                                    | Canada                    | User             |
| B. Trussler                        | Ship's Point Consulting                    | Canada                    | User             |
| C. Vassos                          | Waleco, Inc.                               | Canada                    | Producer         |
| S. Villeneuve                      | Vilco, Ltd.                                | Nova Scotia               | User             |
| K. Webster                         | OPW Fueling Containment Systems, Inc.      | U.S.A.                    | Producer         |
| K. Wilcox                          | Ken Wilcox Associates, Inc.                | U.S.A.                    | User             |
| J. Bablo<br>(Associate Member)     | UL LLC                                     | U.S.A.                    | (Non-Voting)     |
| T. Espejo<br>(Associate Member)    | ULC Standards                              | Canada                    | (Non-Voting)     |
| M. Modéry<br>(Associate Member)    | Environment Canada                         | Canada                    | (Non-Voting)     |
| P. Neil<br>(Associate Member)      | OPW Fueling Containment Systems, Inc.      | U.S.A.                    | (Non-Voting)     |
| R. Sculthorp<br>(Associate Member) | Underwriters Laboratories of Canada        | Canada                    | (Non-Voting)     |
| J. Wade<br>(Project Manager)       | ULC Standards                              | Canada                    | (Non-Voting)     |
| S. Anderson<br>(Secretary)         | ULC Standards                              | Canada                    | (Non-Voting)     |

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.