



ULC Standards
Normes ULC



ANSI/CAN/UL/ULC 2775:2022

JOINT CANADA-UNITED STATES
NATIONAL STANDARD

Standard for Fixed Condensed Aerosol Extinguishing System Units

ULNORM.COM : Click to view the full PDF of UL 2775 2022



ANSI/UL 2775-2022



SCC FOREWORD

National Standard of Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) 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.

ULNORM.COM : Click to view the full PDF of UL 2775 2022

Standard for Fixed Condensed Aerosol Extinguishing System Units, ANSI/CAN/UL/ULC 2775

Second Edition, Dated July 31, 2019

Summary of Topics

This revision of ANSI/CAN/UL/ULC 2775 dated January 21, 2022 includes a change in requirements to the Aging Test; [55.2](#) and [Table 55.1](#).

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The revised requirements are substantially in accordance with Proposals on this subject dated October 15, 2021.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of UL.

UL provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will UL be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if UL or an authorized UL representative has been advised of the possibility of such damage. In no event shall UL's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold UL harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

No Text on This Page

[ULNORM.COM](https://www.ulnorm.com) : Click to view the full PDF of UL 2775 2022



ANSI/UL 2775-2022

JULY 31, 2019
(Title Page Reprinted: January 21, 2022)



1

ANSI/CAN/UL/ULC 2775:2022

Standard for Fixed Condensed Aerosol Extinguishing System Units

First Edition – April, 2014

Second Edition

July 31, 2019

This ANSI/CAN/UL/ULC Safety Standard consists of the Second Edition including revisions through January 21, 2022.

The most recent designation of ANSI/UL 2775 as an American National Standard (ANSI) occurred on January 21, 2022. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This standard has been designated as a National Standard of Canada (NSC) on January 21, 2022.

COPYRIGHT © 2022 UNDERWRITERS LABORATORIES INC.

ULNORM.COM: Click to view the full PDF of UL 2775 2022

No Text on This Page

ULNORM.COM : Click to view the full PDF of UL 2775 2022

CONTENTS

| | |
|---------------|---|
| Preface | 7 |
|---------------|---|

INTRODUCTION

| | |
|------------------------------|----|
| 1 Scope | 11 |
| 2 Components | 11 |
| 3 Units of Measurement | 11 |
| 4 Undated References | 11 |
| 5 Glossary | 11 |

CONSTRUCTION

| | |
|---|----|
| 6 General | 14 |
| 7 Electrically Operated Alarms | 15 |
| 8 Controls and Indicators | 15 |
| 9 Pneumatic Control Assembly Pressure Vessels | 16 |
| 10 Pressure Relief Devices for Pneumatic Control Assemblies | 19 |
| 11 Gaskets and "O" Rings | 20 |
| 12 Pressure Gauges for Pneumatic Control Assemblies | 20 |
| 13 Puncturing Mechanisms | 21 |
| 14 Electrically Operated Devices | 21 |
| 15 Condensed Aerosol Extinguishing Agents | 21 |
| 16 Pneumatic Control Gases | 22 |
| 17 Polymeric Materials and Nonmetallic Parts | 22 |
| 18 Anti-Recoil Devices | 22 |
| 19 Pressure Switches | 22 |

PERFORMANCE

| | |
|---|----|
| 20 General | 23 |
| 21 Discharge Test | 23 |
| 22 Temperature Measurement Test | 24 |
| 23 Mounting Device Test | 24 |
| 24 Rough Usage Test | 25 |
| 25 Vibration Test | 25 |
| 26 Pyrotechnic Reaction Containment Test | 26 |
| 27 Fire Exposure Test | 26 |
| 28 High Humidity Test | 27 |
| 29 Moist Hydrogen Sulfide Air Mixture Corrosion Test | 27 |
| 30 Moist Carbon Dioxide-Sulfur Dioxide Air Mixture Corrosion Test | 27 |
| 31 Salt Spray Corrosion Test | 28 |
| 32 Thirty-Day Elevated Temperature Test | 29 |
| 33 Temperature Cycling Test | 30 |
| 34 One-Year Time Leakage Test | 30 |
| 35 Hydrostatic Pressure Test | 31 |
| 35.1 Pressure vessels | 31 |
| 35.2 Other pressure retaining devices | 32 |
| 35.3 Test method | 32 |
| 36 Pressure Relief Tests | 32 |
| 37 Flexible Hose Assembly Low Temperature Test | 33 |
| 38 Calibration Test – Gauges | 33 |
| 39 Burst Strength Test – Gauges | 33 |

| | | |
|----|---|----|
| 40 | Overpressure Test – Gauges | 34 |
| 41 | Impulse Test – Gauges | 34 |
| 42 | Pressure Relief Test – Gauges | 34 |
| 43 | Water Resistance Test – Gauges | 34 |
| 44 | Pneumatic Operation Test..... | 35 |
| 45 | Pneumatic Time Delay Verification Test..... | 35 |
| 46 | Pressure-Operated Alarm Test | 36 |
| 47 | Operation Test of Manual Actuators and Manual Pull Stations..... | 36 |
| 48 | 500 Cycle Operation Test..... | 37 |
| | 48.1 Electrical initiators..... | 37 |
| | 48.2 Other devices | 37 |
| 49 | Class A and B Fire Extinguishment Tests | 38 |
| | 49.1 General test parameters..... | 38 |
| | 49.2 Class A fire extinguishment tests | 39 |
| | 49.3 Class B fire extinguishment tests | 45 |
| 50 | Distribution Verification Extinguishment Tests with Extinguishing System Units | 46 |
| | 50.1 General..... | 46 |
| | 50.2 Test enclosure | 46 |
| | 50.3 Maximum area coverage and minimum height test arrangement procedure | 47 |
| | 50.4 Maximum height test arrangement procedure | 47 |
| 51 | Distribution Verification Extinguishment Tests with Automatic Extinguisher Unit | 48 |
| | 51.1 General..... | 48 |
| | 51.2 Test enclosures | 49 |
| | 51.3 Maximum area coverage, minimum height, and maximum volume test arrangement procedure | 49 |
| | 51.4 Maximum height and maximum volume test arrangement procedure | 50 |
| 52 | Automatic Extinguisher Unit Automatic Operation Extinguishment Tests | 50 |
| | 52.1 General..... | 50 |
| | 52.2 Test enclosures | 51 |
| | 52.3 Test arrangement procedure..... | 52 |
| 53 | Elastomeric Parts Test | 52 |
| 54 | Stress Corrosion Cracking Test for Brass Parts..... | 52 |
| 55 | Aging Test – Condensed Aerosol Generator | 53 |
| 56 | Aging Tests – Plastic Materials | 55 |
| | 56.1 Air-oven aging test..... | 55 |
| | 56.2 Light and water test..... | 55 |
| 57 | Nameplate Exposure Tests | 56 |
| 58 | Nameplate Adhesion Test | 56 |
| 59 | Nameplate Abrasion Test..... | 57 |
| 60 | Locking Device And Tamper Indicator Test | 57 |

MANUFACTURING AND PRODUCTION TESTS

| | | |
|----|--|----|
| 61 | General | 58 |
| | 61.1 General..... | 58 |
| | 61.2 Aerosol-forming compound | 58 |
| | 61.3 Electrical initiators..... | 58 |
| | 61.4 Hydrostatic pressure test – shells for pneumatic control assemblies | 58 |
| | 61.5 Gauge calibration test for pneumatic control assemblies | 58 |
| | 61.6 Leakage test for pneumatic control assemblies | 58 |

MARKINGS

| | | |
|----|---------------|----|
| 62 | General | 59 |
|----|---------------|----|

INSTRUCTIONS

63 General61
64 Owner's Manual61
65 Design, Installation, Operation, and Maintenance Instruction Manual62

ANNEX A (normative)

A1 Normative References.....65

ANNEX B (CAN) (normative)

B1 Markings – French Translation66

ULNORM.COM : Click to view the full PDF of UL 2775 2022

No Text on This Page

ULNORM.COM : Click to view the full PDF of UL 2775 2022

Preface

This is the Second Edition of the ANSI/CAN/UL/ULC 2775, Standard for Fixed Condensed Aerosol Extinguishing System Units.

UL is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO). ULC Standards is accredited by the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

Annexes [A](#) and [B](#), identified as normative, form a mandatory part of this Standard.

This ANSI/CAN/UL/ULC 2775 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and 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.

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 Joint American National Standard and National Standard of Canada is based on, and now supersedes, the First Edition of UL 2775 and the First Edition of ULC/ORD-C2775-12.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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.

UL's Standards for Safety are copyrighted by UL. Neither a printed nor electronic copy of a Standard should be altered in any way. All of UL's Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of UL.

To purchase UL Standards, visit the UL Standards Sales Site at <http://www.shopulstandards.com/HowToOrder.aspx> or call tollfree 1-888-853-3503.

This Edition of the Standard has been formally approved by the UL Standards Technical Panel (STP) on Extinguishing Systems, STP 300.

This list represents the STP 300 membership when the final text in this standard was balloted. Since that time, changes in the membership may have occurred.

STP 300 Membership

| Name | Representing | Interest Category | Region |
|-----------------------|--|----------------------------------|-----------|
| Art Black | Carmel Fire Protection Associates | AHJ | USA |
| Richard Bolyard | NC Department of Insurance – Office of State Fire Marshal | AHJ | USA |
| Lawrence Carmen | Victaulic | Producer | USA |
| Doug Claywell | Henny Penny Corp. | Commercial/Industrial User | USA |
| Tony Crimi | A.C. Consulting Solutions Inc. | General Interest | Canada |
| Bradford Cronin | Newport Fire Department | AHJ | USA |
| Gian Guido De Parenti | Firepro Systems Ltd. | Producer | Cyprus |
| James Engman | Ansul Incorporated | Producer | USA |
| Dwayne Garris | FEMA | General Interest | USA |
| Anthony Gee | Fireaway Inc. | Producer | USA |
| Diane Haithcock | Underwriters Laboratories Inc. | STP Chair – Non-voting | USA |
| Timothy Kelley | Giles Enterprises Inc. | Producer | USA |
| Chuck Kimball | Brooks Equipment Company, Inc. | Producer | USA |
| Brian Lane | Durham County Fire Marshal's Office | AHJ | USA |
| Bruce Levitt | Levitt-Safety Ltd | Supply Chain | Canada |
| Richard Lupien | Kidde-Fenwal Inc. | Producer | USA |
| Norbert Makowka | National Association of Fire Equipment Distributors | General Interest | USA |
| Thomas Moskaluk | Moskaluk Consulting | Producer | USA |
| Derek O'Donnell | Phoenix Fire Systems Inc. | Supply Chain | USA |
| Maurice Pilette | Mechanical Designs Ltd. | General Interest | USA |
| Scott Pugsley | Seneca College | General Interest | Ontario |
| Mark Robin | The Chemours Co. | Supply Chain | USA |
| Rajesh Sabadra | K V Fire Chemicals (I) Pvt Ltd | Supply Chain | India |
| Kevin Scott | KH Scott & Associates | AHJ | USA |
| Blake Shugarman | UL LLC | Testing and Standards | USA |
| Raymond Stacy | FM Approvals | Testing and Standards | USA |
| David Tiller | Office of the Fire Marshal & Emergency Management – Ontario Fire College | AHJ | Ontario |
| Pock Utiskul | US Coast Guard | Government | USA |
| Nicolette Weeks | Underwriters Laboratories Inc. | STP Project Manager – Non-voting | USA |
| Gideon Yonathan | Servvo Fire Indonesia | International Delegate | Indonesia |

International Classification for Standards (ICS): 13.220.20

For further information on UL standards, please contact:

Underwriters Laboratories Inc.
171 Nepean Street, Suite 400
Ottawa, Ontario K2P 0B4
Phone: 1-613.755.2729
E-mail: ULCStandards@ul.com
Web site: ul.org

This Standard is intended to be used for conformity assessment.

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 this particular application.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE.

ULNORM.COM : Click to view the full PDF of UL 2775 2022

No Text on This Page

ULNORM.COM : Click to view the full PDF of UL 2775 2022