



JOINT CANADA-UNITED STATES  
NATIONAL STANDARD

# ANSI/CAN/UL 2901A:2023

## STANDARD FOR SAFETY

### Corrosion Control Additives for Use in Fire Sprinkler Systems



ANSI/UL 2901A-2023



## **SCC FOREWORD**

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UL Standard for Safety for Corrosion Control Additives for Use in Fire Sprinkler Systems, ANSI/CAN/UL 2901A

First Edition, Dated November 28, 2023

### **Summary of Topics**

***This is the First Edition of ANSI/CAN/UL 2901A, Standard for Corrosion Control Additives for Use in Fire Sprinkler Systems, dated November 28, 2023.***

The new requirements are substantially in accordance with Proposal(s) on this subject dated September 8, 2023.

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ANSI/CAN/UL 2901A:2023

**Standard for Corrosion Control Additives for Use in Fire Sprinkler Systems**

**First Edition**

**November 28, 2023**

This ANSI/CAN/UL Safety Standard consists of the First Edition.

The most recent designation of ANSI/UL 2901A as an American National Standard (ANSI) occurred on November 28, 2023. 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 November 28, 2023.

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## Preface

This is the First Edition of ANSI/CAN/UL 2901A, Standard for Corrosion Control Additives for Use in Fire Sprinkler Systems.

ULSE is accredited by the American National Standards Institute (ANSI) and 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.

This ANSI/CAN/UL 2901A 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 joint American National Standard and National Standard of Canada is based on, and now supersedes the first issue of UL 2901A, Outline of Investigation for Corrosion Control Additives for Use in Fire Sprinkler Systems.

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>.

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This Edition of the Standard has been formally approved by the Technical Committee (TC) on TC 2901, Antifreeze Solutions for Use in Fire Sprinkler Systems.

This list represents the TC 2901 membership when the final text in this Standard was balloted. Since that time, changes in the membership may have occurred.

### TC 2901 Membership

| Name           | Representing                              | Interest Category               | Region |
|----------------|-------------------------------------------|---------------------------------|--------|
| P. Berken      | American Valve & Hydrant Mfg. Co.         | Supply Chain                    | USA    |
| D. Bonn        | Travelers Insurance                       | General Interest                | USA    |
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| M. Klaus       | National Fire Protection Association | Testing & Standards Org | USA     |
| G. Lobdell     | Dyne Fire Protection Labs            | Testing & Standards Org | USA     |
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| J. McDonald    | American Fire Sprinkler Association  | General Interest        | USA     |
| T. Noble       | American Fire Protection Group       | General Interest        | USA     |
| M. O'Leary     | Huguenot Labs                        | Producer                | USA     |
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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.

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## INTRODUCTION

### 1 Scope

1.1 This Standard covers requirements for corrosion control additives for fire sprinkler systems, such as corrosion inhibitors.

1.2 These solutions are intended for use in wet pipe sprinkler systems for installation in accordance with the manufacturer's design and installation instructions and the following standards:

- a) Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, NFPA 13D;
- b) Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies, NFPA 13R; and
- c) Standard for Installation of Automatic Sprinkler Systems, NFPA 13.

1.3 These solutions are intended for use in wet pipe sprinkler systems and intended to be inspected, tested, and maintained in accordance with the Standard for Inspection, Testing and Maintenance of Water Based Fire Protection Systems, NFPA 25.

1.4 This Standard does not contain requirements to evaluate the risk associated with products of combustion.

1.5 The requirements of this Standard evaluate the safety and compatibility of the corrosion control additives when used in a fire sprinkler system but do not evaluate the level of corrosion protection provided by an individual corrosion control additive.

### 2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

### 3 Referenced Publications

3.1 Any undated reference to a code or standard appearing in the requirements of this Standard shall be interpreted as referring to the latest edition of that code or standard.

3.2 The following publications are referenced in this Standard:

NFPA 13, *Installation of Sprinkler Systems*

NFPA 13D, *Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*

NFPA 13R, *Installation of Sprinkler Systems in Low-Rise Residential Occupancies*

NFPA 25, *Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*

UL/ULC 199, *Automatic Sprinklers for Fire-Protection Service*

UL 2901, *Antifreeze Solutions for Use in Fire Sprinkler Systems*

## 4 Glossary

- 4.1 For the purpose of this Standard, the following definitions apply.
- 4.2 ADDITIVE – A chemical intended to mitigate corrosion when mixed with sprinkler system water.
- 4.3 ADDITIVE SOLUTION – A mixture of water and a chemical intended to mitigate corrosion.

## CONSTRUCTION

### 5 General

5.1 A corrosion control additive solution shall comply with the requirements of UL 2901, except as noted herein.

5.2 An additive solution may be pre-mixed at the factory or an additive may be dosed in field applications. Where an additive is dosed in field applications, the manufacturer shall provide information for proper dosing so the additive concentration is consistent throughout the fire sprinkler system. See Use and Installation Instructions in Section [13](#).

## PERFORMANCE

### 6 General

6.1 A corrosion control additive solution shall comply with the requirements of UL 2901, except as noted herein.

### 7 Electrical Conductivity

7.1 The electrical conductivity of an additive solution premixed or as dosed shall not exceed 7000  $\mu$ Siemens/cm.

7.2 Where an additive is dosed in the field, the method for determining the conductivity of the as dosed additive solution shall be included in the installation instructions.

### 8 Compatibility with Polymeric Materials

8.1 Evaluation of an additive solution in accordance with the Compatibility with Polymeric Materials test described in UL 2901 is not required if the product is not intended to be used with polymeric materials.

8.2 Additive solutions intended for use with polymeric materials shall be evaluated in accordance with the requirements of UL 2901.

### 9 Fire Fighting Effectiveness

9.1 Where the final concentration of an additive solution in its intended end use concentration is 98 % water or greater, the 350 Pound Wood Crib Fire Test in UL/ULC 199 may be used for evaluation of all Fire Fighting Effectiveness occupancy classifications and applications indicated in UL 2901 without any volume limitations provided the additive solution complies with the following requirements:

- a) The test set up and conditions in UL 2901 are to be followed;