



UL 2443

STANDARD FOR SAFETY

Flexible Sprinkler Hose with Fittings for
Fire Protection Service

UL Standard for Safety for Flexible Sprinkler Hose with Fittings for Fire Protection Service, UL 2443

Fourth Edition, Dated September 7, 2023

Summary of Topics

This new edition of ANSI/UL 2443, dated September 7, 2023, includes the following changes in requirements:

- Editorial changes; Section [4](#)***
- Maximum K-factor of Sprinkler Intended to be Attached to a Flexible Hose Based Upon the Inside Diameter of the Hose; [6.4](#) and [Table 6.1](#)***
- New Method for Determining Flexible Hose Pressure Loss and Referencing the Pressure Losses in the Manufacturer's Instructions; Section [12](#)***
- Update to Marking Requirements; [24.1](#), [24.3](#), and [25.1](#)***
- Electronic Installation Instructions; [25.1](#)***

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated June 30, 2023.

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UL 2443

Standard for Flexible Sprinkler Hose with Fittings for Fire Protection Service

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Fourth Edition

September 7, 2023

This ANSI/UL Standard for Safety consists of the Fourth Edition.

The most recent designation of ANSI/UL 2443 as an American National Standard (ANSI) occurred on September 7, 2023. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

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INTRODUCTION

1 Scope

1.1 This Standard covers flexible sprinkler hose with fittings intended for direct connection to fire sprinklers in installations requiring a flexible attachment to the sprinkler system piping such as clean rooms, suspended ceilings, and exhaust ducts.

1.2 The products covered by this Standard are intended for use in sprinkler systems installed in accordance with the Standard for Installation of Sprinkler Systems, NFPA 13; Standard for the Installation of Sprinkler Systems in Residential Occupancies Up to Four Stories in Height, NFPA 13R; and Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Mobile Homes, NFPA 13D.

2 Components

2.1 Except as indicated in [2.2](#), a component of a product covered by this Standard shall comply with the requirements for that component.

2.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this Standard, or
- b) Is superseded by a requirement in this Standard.

2.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

3 Units of Measurement

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

4 Referenced Publications

4.1 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.

4.2 The following publications are referenced in this Standard:

ASME B1.20.1, *Pipe Threads, General Purpose (Inch)*

ASTM A53/A53M, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless*

ASTM A653/A653M, *Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process*

ASTM B117, *Standard Practice for Operating Salt Spray (Fog) Apparatus*

ASTM B568, *Standard Test Method for Measurement of Coating Thickness by X-Ray Spectrometry*

ASTM C635/C635M, *Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings*

ASTM C636/C636M, *Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels*

AWWA C606, *Grooved and Shouldered Joints*

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*

UL 157, *Gaskets and Seals*

UL 213, *Rubber Gasketed Fittings for Fire Protection Service*

UL 969, *Marking and Labeling Systems*

UL 1821, *Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service*

5 Glossary

5.1 For the purpose of this Standard the following definitions apply:

5.2 BEND – A 90-degree change in direction of the flexible sprinkler hose.

5.3 FLEXIBLE HOSE WITH FITTINGS HAVING HIGH FLEXIBILITY – This type of hose with fittings is intended to be used in applications where frequent movement between the two ends of the hose is expected after installation.

5.4 FLEXIBLE HOSE WITH FITTINGS HAVING LIMITED FLEXIBILITY – This type of hose with fittings is intended to be used in applications where little or no movement between the two ends is expected after installation.

5.5 MINIMUM BEND RADIUS – The least distance permitted by the manufacturer as measured from the focal point to the centerline of the hose. See [Figure 5.1](#).