UL 1479

STANDARD FOR SAFETY

Fire Tests of Penetration Firestops

UL Standard for Safety for Fire Tests of Penetration Firestops, UL 1479

Fourth Edition, Dated June 10, 2015

Summary of Topics

This revision of ANSI/UL 1479 dated March 18, 2026 includes adding a statement to the scope indicating that the requirements do not address chemical compatibility of the materials used in the penetration firestop system: 1.12.

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 new requirements are substantially in accordance with Proposal(s) on this subject dated February 7, 2026.

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UL 1479

Standard for Fire Tests of Penetration Firestops

Prior to the first edition, the requirements for the products covered by this Standard were included in the Standard for Fire Tests of Building Construction and Materials, UL 263, and in the Standard for Fire Tests of Door Assemblies, UL 10B.

Prior to the 4th edition, the title of the Standard was Standard for Fire Tests of Through-Penetration Firestops.

First Edition – January, 1983
Second Edition – June, 1994
Third Edition – May, 2003

Fourth Edition

June 10, 2015

This ANSI/UL Standard for Safety consists of the Fourth Edition including revisions through March 18, 2026.

The most recent designation of ANSI/UL 1479 as an American National Standard (ANSI) occurred on March 18, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE 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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INTRODUCTION

1 Scope

1.1 These requirements cover through penetration firestops of various materials and construction that are intended for use in openings in fire resistive wall, floor or floor-ceiling assemblies, and membrane type penetration firestops of various materials and construction that are intended for use in openings in fire resistive wall assemblies.

1.2 The method of testing penetration firestops as specified by these requirements consists of exposure of test samples to a fire of standard time and temperature and to an application of a hose stream. Ratings are then established on the basis of:

a) The length of time the firestop resists fire before the first development of through openings or flaming on the unexposed surface;

b) Acceptable limitation of thermal transmission; and

c) Acceptable performance under the application of the hose stream.

1.3 The method of testing also includes optional air leakage tests to determine the rate of air leakage through penetration firestop systems resulting from a specified air pressure difference applied across the surface of the systems.

1.4 The method of testing also includes optional water leakage tests to determine the ability of penetration firestop systems to resist the passage of water under a three foot pressure head. This method does not evaluate the ability of uncured firestop systems to resist such exposure.

1.5 Two ratings are established for each penetration firestop system: an F rating based upon flame occurrence on the unexposed side of the test sample and acceptable hose stream performance; and a T rating based on temperature rise and flame occurrence on the unexposed side of the test sample and acceptable hose stream performance.

1.6 An L rating may also be established for a penetration firestop system. The L rating is based on the amount of air leakage through the test sample.

1.7 A W rating may also be established for a penetration firestop system. The W rating is based on the water resistance of the test sample.

1.8 The method of testing penetration firestop systems containing piping systems for vented (drain, waste or vent) systems and closed (process or supply) systems is differentiated by the capping or non-capping of the piping systems on the unexposed side of the test assembly as described in 5.1.1.2.

1.9 Tests conducted in accordance with these requirements are intended to demonstrate the performance of penetration firestops during exposure to fire, but are not intended to determine acceptability of firestops for use after exposure to fire. These requirements do not cover the ampacity of conductors encased in penetration firestop materials.

1.10 The results obtained from the air leakage tests are expressed in ft^3/min (m^3/s) per ft^2 (m^2) of opening. The results are intended to develop data to assist authorities having jurisdiction, and others, in determining the acceptability of penetration firestops with reference to the control of air movement through the assembly.

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1.11 These requirements do not cover outlet boxes and fittings for use in and evaluated for fire resistance as part of a fire-resistance-rated floor, floor-ceiling or wall assembly.

1.12 These requirements do not address the chemical compatibility of the materials used in the penetration firestop system.

2 Units of Measurement

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

3 References

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.

4 Glossary

4.1 For the purpose of this standard the following definitions apply.

4.2 AIR-FLOW METERING SYSTEM – A device used to measure the air flow.

4.3 AIR LEAKAGE (Q) – The volume of air flowing, per unit of time, through the openings around the test sample under a test pressure difference, expressed as ft^3/min (m^3/s). This air leakage volume is to be reported standardized to an ambient air temperature of 75°F (24°C).

4.4 AIR LEAKAGE TEST CHAMBER – A sealed chamber or box with an opening, a removable mounting panel, or one open side in which or against which the test sample is installed and sealed.

4.5 AIR SYSTEM – A controllable blower, compressed air supply, exhaust system, or reversible blower designed to provide an essentially constant required air flow at the specified fixed test pressure difference for the period required to obtain readings of air leakage.

4.6 AMBIENT TEMPERATURE EXPOSURE – The temperature at the exposed face of the test sample is to be 75 ±20°F (24 ±11°C).

4.7 ELEVATED TEMPERATURE EXPOSURE – The temperature at the exposed face of the test sample is to be 400 ±10°F (204 ±5°C).

4.8 EXTRANEOUS LEAKAGE (Q_L) – The difference between the metered air flow (Q_m) and the air leakage (Q).

4.9 MEMBRANE-PENETRATION FIRESTOP – A specific construction that:

a) Consists of material(s) that fills or covers the opening and that is intended to prevent the passage of flame;

b) Consists of penetrating items, such as outlet boxes, cabinets, pipes, ducts, along with their means of support through the wall opening; and

c) Only penetrates one side of a fire resistive assembly.

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