

35
 36
 37



Underwriters Laboratories Inc.®

An independent, not-for-profit organization testing for public safety

April 17, 1996

Revision pages for

Standard for

Tests for Uplift Resistance of Roof Assemblies

UL 580, Fourth Edition

Attached to this transmittal notice is a revision of the Fourth edition of UL 580.

A CHANGE ON A PAGE DATED APRIL 17, 1996 IS INDICATED BY A SMALL PRINT NOTE FOLLOWING THE AFFECTED ITEM, PRECEDED AND FOLLOWED BY AN ASTERISK.

THIS REVISION IS BEING ISSUED TO PROVIDE EDITORIAL CLARIFICATION OF THE REQUIREMENTS. THE REQUIREMENTS ARE NOW IN EFFECT.

Attention is directed to the note on the title page of this standard identifying that the Department of Defense has adopted the text of UL 580.

Revised and/or additional pages may be issued from time to time.

With the inclusion of the accompanying material, the standard consists of pages dated as shown in the following checklist:

Page	Date
1	May 31, 1994 (Reprinted: April 17, 1996)
2	—
3, 4	May 31, 1994
5, 6	April 17, 1996
7 – 10	May 31, 1994
11	April 17, 1996

MAY 31, 1994

(Title Page Reprinted: April 17, 1996)

1

UL 580

Standard for

**Tests for Uplift Resistance of Roof
Assemblies**

The First and Second editions were titled Test for Wind-Uplift Resistance of Roof Assemblies.

First Edition – August, 1973
Second Edition – November, 1980
Third Edition – May, 1988

Fourth Edition

May 31, 1994

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

The Department of Defense (DoD) has adopted UL 580 on September 13, 1991. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Revisions of this standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest published set of revision pages.

ISBN 1-55989-620-5

COPYRIGHT © 1973, 1996 UNDERWRITERS LABORATORIES INC.

INTRODUCTION

1 Scope

1.1 The method of test specified in this standard is intended to determine the uplift resistance of roof assemblies consisting of the roof deck and roof covering materials. It is applicable to any type of roof assembly which is adaptable to the test equipment. Tests to evaluate other potential hazards of roof assemblies are not within the scope of these requirements.

1.1 revised April 17, 1996

1.2 The purpose of this test is to evaluate the comparative resistance of roof assemblies to positive and negative pressures.

1.3 The test evaluates the roof deck, its attachment to supports, and roof covering materials. It does not evaluate roofs adjacent to chimneys, overhanging eaves, or similar construction, connections of the assembly to main structural supports (girders, columns, or other supports), structural integrity of secondary supports (purlins, joists, bulb tees, or the like), or deterioration of roofing materials.

1.3 revised April 17, 1996

1.4 A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements in this standard, and that involves a risk of fire, electric shock, or injury to persons, shall be evaluated using the appropriate additional component and end-product requirements as required to maintain the level of safety as originally anticipated by the intent of this standard. A product whose features, characteristics, components, materials, or systems conflict with specific provisions of this standard cannot be judged to comply with this standard. Where appropriate, revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this standard.

1.4 revised April 17, 1996

2 General

2.1 Units of measurement

2.1.1 If a value for measurement is followed by a value in other units in parentheses, the first stated value is the requirement.

2.1.1 revised April 17, 1996

2.2 Undated references

2.2.1 Any undated reference to a code or standard shall be interpreted as referring to the latest edition of that code or standard.

TEST APPARATUS

3 General

3.1 The test apparatus is to consist of three sections which include a top section to create a uniform vacuum, a center section in which the roof assembly is constructed, and a bottom section to create a uniform positive pressure. See Figure 3.1. Each section is to be sealed to maintain the specified pressures.

3.2 The inside dimensions of the test apparatus are to be a minimum of 10 by 10 feet (3.05 by 3.05 m).

3.3 The test chamber is to be capable of applying steady positive pressures on the underside of the test assembly and both steady and oscillating negative pressures, as specified, upon the top surface.

3.4 Recording equipment is to be used to make a permanent record of the pressure levels developed in the test as a function of time.

3.4 revised April 17, 1996

3.5 Sections 4 – 6 contain a specification of the presently used test apparatus. Design modifications shall not be made unless the test results are equivalent to the results obtained from the specified apparatus.

3.5 revised April 17, 1996

Figure 3.1
Assembled uplift test apparatus

NOTE: For this photograph, see the printed copy of Page 7
provided with the WordPerfect file for this standard.

TEST ASSEMBLY

8 Construction Features

8.1 The test assembly is to be representative of the construction for which classification is required as to materials, workmanship, and details such as dimensions of parts, and shall be built under conditions representative of those in building construction. Properties of the materials and ingredients used in the test assembly together with their location and method of attachment are to be determined and recorded.

8.1 revised April 17, 1996

8.2 The dimensions of the test assembly are to be a minimum of 10 by 10 feet (3.05 by 3.05 m). The test assembly shall contain side and end joints when such occur in field installation. The test assembly shall consist of secondary bearing members, such as purlins and joists, to which the roof decking is fastened or on which insulation and roof coverings are applied.

8.2 revised April 17, 1996

8.3 The assembly components, including secondary members, are to be located to best represent field installations within the restraints provided by the test frame.

8.4 The periphery of the test assembly is to be sealed to prevent passage of air under pressure. When a built-up roof covering is used, nominal 1- by 4-inch wood strips are to be placed on top of the covering along the edges and fastened to the assembly in order to prevent air leakage between the covering and the test frame.

8.4 revised April 17, 1996

8.5 The test assembly is to be cured at room temperature for a period until representative field strength, humidity, and temperature are achieved. Water-mixed materials such as gypsum or Portland cement concrete are to be cured a minimum of 30 days. Built-up roof coverings are to be tested after reaching an ambient room temperature.

CLASSIFICATIONS

9 General

9.1 Four classifications are obtainable. The classifications are Class 15, Class 30, Class 60, and Class 90.

9.1 revised April 17, 1996

9.2 The classification assigned to an assembly is to be that Class level of the test successfully completed in compliance with the specifications outlined in 9.3 and 9.4.

9.3 To obtain a Class 90 rating, the sample shall be subjected to the Class 30 and Class 60 tests, in that order, prior to the Class 90 test. Similarly, to obtain a Class 60 rating, a sample shall be subjected to a Class 30 test first and then to the Class 60 test. A Class 30 rating, however, does not require that the assembly be subjected to a Class 15 test first.

9.4 The test assembly shall retain its structural integrity during or following the test without evidence of permanent damage. The following are examples of permanent damage:

- a) Buckling of rolled members that results in permanent loss of stiffness as determined by separate load tests comparing buckled and unbuckled members.
- b) Failure of one or more fasteners of any type.
- c) Progressive delamination or bubbling from within or between any of the components of the assembly.

**Underwriters Laboratories Inc.®**A not-for-profit organization dedicated to public safety
and committed to quality service**April 14, 1995****Revision pages for****Standard for****Tests for Uplift Resistance of Roof Assemblies****UL 580, Fourth Edition**

Attached to this transmittal notice is a reprinted title page for the Fourth edition of UL 580.

Attention is directed to the note on the title page of this standard identifying that the Department of Defense has adopted the text of UL 580.

Revised and/or additional pages may be issued from time to time.

With the inclusion of the accompanying material, the standard consists of pages dated as shown in the following checklist:

Page	Date
1	May 31, 1994 (Reprinted: April 14, 1995)
2	—
3 – 11	May 31, 1994

MAY 31, 1994

(Title Page Reprinted: April 14, 1995)

1

UL 580

Standard for

**Tests for Uplift Resistance of Roof
Assemblies**

The First and Second editions were titled Test for Wind-Uplift Resistance of Roof Assemblies.

First Edition – August, 1973
Second Edition – November, 1980
Third Edition – May, 1988

Fourth Edition

May 31, 1994

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

The Department of Defense (DoD) has adopted UL 580 on September 13, 1991. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Revisions of this standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest published set of revision pages.

ISBN 1-55989-620-5

COPYRIGHT © 1973, 1995 UNDERWRITERS LABORATORIES INC.