UL 618

STANDARD FOR SAFETY

Concrete Masonry Units

UL Standard for Safety for Concrete Masonry Units, UL 618

Tenth Edition, Dated November 4, 2024

Summary of Topics

This Tenth Edition of ANSI/UL 618 dated November 4, 2024 includes updated Referenced Publications, Section 4, and editorial updates throughout the Standard.

The requirements are substantially in accordance with Proposal(s) on this subject dated September 20, 2024.

No Text on This Page

UL 618

Standard for Concrete Masonry Units

Previous numbered and unnumbered editions of standards covering this material predate 1922.

First Edition – November, 1938
Second Edition – March, 1945
Third Edition – July, 1949
Fourth Edition – December, 1953
Fifth Edition – August, 1958
Sixth Edition – November, 1970
Seventh Edition – July, 1975
Eighth Edition – September, 1979
Ninth Edition – February, 1995

Tenth Edition

November 4, 2024

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

The most recent designation of ANSI/UL 618 as an American National Standard (ANSI) occurred on November 4, 2024. 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 On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com.

No Text on This Page

CONTENTS

INTRODUCTION

CONSTRUCTION

SHIPPING

No Text on This Page

INTRODUCTION

1 Scope

1.1 These requirements cover concrete masonry units for use in fire resistive walls in accordance with the conditions of acceptance of the Standard for Fire Tests of Building Construction and Materials, UL 263.

1.2 Concrete masonry units are rated as follows:

a) 2-hour units are intended for use in fire resistive walls having a rating of 2 hours or less.

b) 3-hour units are intended for use in fire resistive walls having a rating of 3 hours or less.

c) 4-hour units are intended for use in fire resistive walls having a rating of 4 hours or less.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this Standard shall:

a) Comply with the requirements for that component as specified in this Standard;

b) Be used in accordance with its rating(s) established for the intended conditions of use; and

c) Be used within its established use limitations or conditions of acceptability.

2.2 A component need not comply with a specific requirement that:

a) Involves a feature or characteristic not needed in the application of the component in the product covered by this Standard;

b) Is superseded by a requirement in this Standard; or

c) Is separately evaluated when forming part of another component, provided the component is used within its established ratings and limitations.

2.3 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 for which they have been recognized.

3 Units of Measurement

3.1 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement.

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:

ASTM C140/C140M, *Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units*

UL 263, *Fire Tests of Building Construction and Materials*

CONSTRUCTION

5 General

5.1 A concrete masonry unit shall conform to the following dimensions:

a) Width (or thickness as laid in a wall) shall be not less than 7-5/8 inches (194 mm).

b) Height shall be not more than 8 inches (203 mm).

c) Length shall be not more than 18 inches (457 mm).

5.2 Hollow concrete masonry units shall contain two or three rectangular or oval core holes.

5.3 The face shell thickness in a unit provided with ornamental facing shall be taken at the thinnest face shell dimension.

6 Dimensions, Cement-Aggregate Proportions and Compressive Strength

6.1 A concrete masonry unit produced from an aggregate in Table 6.1 shall have a minimum face shell thickness and a minimum web thickness as shown in Table 6.2.

Table 6.1
Thickness, material and strength requirements

Type of aggregate[a]	Manufacturing process	Equivalent thickness[b] inch (mm)			Cement to aggregate ratio maximum	Minimum compressive strength, psi	
		Hourly rating					
		2 hr	3 hr	4 hr		Average	Individual
Expanded clay, shale, slate	Rotary kiln process	3.6 (91)	4.4 (112)	5.1 (136)	1:10.0	1000	800
Expanded clay, shale, slate	Sintered process	4.2 (107)	4.75 (121)	5.4 (137)	1:9.0	1000	800
Expanded slag	Blast furnace	4.1 (104)	4.8 (122)	5.3 (135)	1:8.0	1000	800
Fly-ash	Sintered process	4 (102)	4.7 (119)	5.2 (132)	1:8.5	1000	800
Fly-ash with sand	Sintered process (fly ash)	4.2 (107)	4.9 (124)	5.4 (137)	1:8.5	1000	800
Pumice	–	–	4.1 (104)	4.4 (112)	1:7.0	1000	800
Natural, by-products with or without sand	–	4.2 (107)	5.5 (140)	–	1:7.0	700	600
Natural, by-products with or without sand	–	–	–	6.5 (165)	1:6.0	1800	1600

[a] Units made of a blend of aggregates shall meet the equivalent thickness and compressive strength requirements of each component of the blend, and also contain a cement to aggregate ratio of the component which requires the greater proportion of cement.

[b] Equivalent thickness is defined as the average thickness of solid material in the wall and is represented by the formula:

Table 6.1 Continued on Next Page