



**Designation: C 37/C 37M – 9901**

## **Standard Specification for Gypsum Lath<sup>1</sup>**

This standard is issued under the fixed designation C 37/C 37M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

### **1. Scope\***

1.1 This specification covers plain and foil-backed types of gypsum lath which is designed to be used as a base for application of gypsum plaster (see Specification C 28).

NOTE 1—Specification C 841 contains application procedures for interior lathing and furring, and Specification C 842 contains application procedures for interior gypsum plaster.

1.2 The values stated in either inch-pound or SI (metric) units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system shall be used independent of the other. Values from the two systems shall not be combined.

1.3 The text of this standard references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

### **2. Referenced Documents**

2.1 *ASTM Standards:*

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<sup>1</sup> This specification is under the jurisdiction of ASTM Committee C-11 on Gypsum and Related Building Materials and Systems and is the direct responsibility of Subcommittee C11.01 on Specifications and Test Methods for Gypsum Products.

Current edition approved ~~Oct. 10, 1999~~ May 10, 2001. Published ~~January 2000~~ July 2001. Originally published as C 37 – 21 T. Last previous edition C 37 – 959.

**\*A Summary of Changes section appears at the end of this standard.**

- C 11 Terminology Relating to Gypsum and Related Building Materials and Systems<sup>2</sup>
- C 28 Specification for Gypsum Plasters<sup>2</sup>
- C 473 Test Methods for Physical Testing of Gypsum Panel Products<sup>2</sup>
- C 841 Specification for Installation of Interior Lathing and Furring<sup>2</sup>
- C 842 Specification for Application of Interior Gypsum Plaster<sup>2</sup>
- C 1264 Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Board<sup>2</sup>
- E 96 Test Methods for Water Vapor Transmission of Materials<sup>3</sup>
- E 119 Test Methods for Fire Tests of Building Construction and Materials<sup>4</sup>

### 3. Terminology

3.1 Definitions of terms shall be in accordance with Terminology C 11.

### 4. Materials and Manufacture

- 4.1 Plain gypsum lath shall consist of a noncombustible core, essentially gypsum, surfaced with paper bonded to the core.
- 4.2 Foil-backed gypsum lath shall consist of plain gypsum lath with a layer of aluminum foil laminated to the back surface.

NOTE 12—Foil-backed gypsum lath shall be installed with the foil surface against the framing members. The foil surface is not adapted to receive or retain plaster.

4.3 Gypsum lath, type X (special fire-resistant) designates gypsum lath complying with this specification that provides not less than 1 h fire-resistance for lath  $\frac{3}{8}$  in. [9.5 mm] thick, applied perpendicular with and on each side of load bearing 2 × 4 wood studs spaced 16 in. [406 mm] o.c. with blue lath nails,  $1\frac{1}{8}$  in. [29 mm] long, 0.092 in. [2.3 mm] diameter shank,  $\frac{1}{64}$  in. [7.5 mm] diameter heads, spaced 5 in. [127 mm] o.c. with lath joints staggered 16 in. [406 mm] on each side of the partition, over which is applied  $\frac{1}{2}$  in. [12.7 mm] of 1:2 gypsum sand plaster, and tested in accordance with the requirements of Test Method E 119.

NOTE 23—Consult producers for independent test data on assembly details and fire resistance classifications for other types of construction. See official fire test reports, or listings from recognized fire testing laboratories, for assembly particulars, materials, and classifications.

NOTE 34—The definition of type X as given in 4.3 is intended only as a test to define the gypsum lath as meeting the requirements of type X. This test does not indicate a preferred application nor does it limit the use of the product in other fire rated assemblies.

### 5. Physical Properties

5.1 Specimens shall be taken from the samples obtained in accordance with Specification C 1264.

5.2 Specimens shall be tested in accordance with Test Methods C 473.

5.2.1 *Flexural Strength*—The specimens shall be tested face up and face down. The average breaking load shall be not less than the following:

Thickness, in. [mm]	Method A		Method B	
	Load, lbf [N] Bearing Edges Across Fiber of Surfacing	Load, lbf [N] Bearing Edges Parallel to Fiber of Surfacing	Load, lbf [N] Bearing Edges Across Fiber of Surfacing	Load, lbf [N] Bearing Edges Parallel to Fiber of Surfacing
$\frac{3}{8}$ [9.5]	60 [267]	25 [111]	56 [249]	21 [93]
$\frac{1}{2}$ [12.7]	100 [445]	35 [156]	97 [431]	31 [138]

5.2.2 *Humidified Deflection*—The specimens shall have an average deflection of not more than the following:

Thickness, in. [mm]	Humidified Deflection, Eighths of an inch [mm]
$\frac{3}{8}$ [9.5]	15 [48]
$\frac{1}{2}$ [12.7]	10 [32]

5.2.3 *Core, End, and Edge Hardness*—The specimens shall have an average hardness of not less than 15 lbf [67 N] when tested by Method A and 11 lbf [49 N] when tested by Method B.

5.2.4 *Nail-Pull Resistance*—The specimen shall have an average nail-pull resistance of not less than the following:

Thickness, in. [mm]	Method A	Method B
	Nail Pull Resistance, lbf [N]	Nail Pull Resistance, lbf [N]
$\frac{3}{8}$ [9.5]	50 [222]	46 [205]
$\frac{1}{2}$ [12.7]	70 [312]	66 [294]

<sup>2</sup> Annual Book of ASTM Standards, Vol 04.01.

<sup>3</sup> Annual Book of ASTM Standards, Vol 04.06.

<sup>4</sup> Annual Book of ASTM Standards, Vol 04.07.

### 5.3 Foil Backed Gypsum Lath:

5.3.1 Foil-backed gypsum lath shall meet all of the requirements for gypsum lath.

5.3.2 When tested in accordance with Test Method E 96, the permeance of foil-backed gypsum lath shall be not more than 0.30 perm [17 ng/Pa·s·m<sup>2</sup>] (Desiccant Method) for the condition of 50 % relative humidity on the face of the lath and 0 % relative humidity on the foil-covered back side of the lath.

## 6. Dimensions and Tolerances

6.1 Specimens shall be taken from the samples obtained in accordance with Specification C 1264.

6.2 Thickness, width, length, and end squareness shall be determined in accordance with Test Methods C 473.

6.2.1 *Thickness*—The nominal thickness shall be  $\frac{3}{8}$  or  $\frac{1}{2}$  in. [9.5 or 12.7 mm] with tolerances in the nominal thickness of  $\pm \frac{1}{32}$  in. [0.8 mm] and with local variations of  $\pm \frac{1}{16}$  in. [1.6 mm] from the nominal thickness.

6.2.2 *Width*—The nominal width shall be up to 48 in. [1220 mm], with a tolerance of  $\frac{3}{16}$  in. [5 mm] under and  $\frac{1}{8}$  in. [3 mm] over the specified width.

6.2.3 *Length*—The nominal length shall be 32, 36, 48, and up to 144 in. [810, 910, 1220, and 3660 mm] and tolerances shall be  $\frac{1}{4}$  in. [6 mm] under and  $\frac{1}{8}$  in. [3 mm] over the specified width.

6.2.4 *End Squareness*—Corners shall be square with a tolerance of  $\pm \frac{1}{4}$  in. [6 mm] in the full width of the lath.

6.3 *Edges and Ends*—The edges and ends shall be straight and either round or square.

## 7. Finish and Appearance

7.1 The surfaces of gypsum lath shall be true and free from imperfections that render the lath unfit to receive and retain gypsum plasters.

7.2 Gypsum lath having burred or broken corners shall be considered acceptable provided that the burred or broken portion is not more than 1 in. [25 mm] in either dimension.

## 8. Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling and Storage

8.1 Shall be in accordance with Specification C 1264.

## 9. Keywords

9.1 gypsum; gypsum lath; gypsum lath, type X; foil-backed; ceiling; partitions; wall

## SUMMARY OF CHANGES

Committee C-11 has identified the location of selected changes to this standard since the last issue, C 37/C 37M-959, that may impact the use of this standard.

- ~~(1) The entire standard Note 3 was placed into the C 11 standard product format.~~
- ~~(2) 1.2 was revised and a new 1.3 was added.~~
- ~~(3) Terminology C 11, Specification C 1264, and Test Methods E 119 were added to 2.1.~~
- ~~(4) Added Section 3, Terminology.~~
- ~~(5) Added new notes to new 4.3.~~
- ~~(6) Re-organized Physical Properties and Dimensions Sections (new Sections 5 & 6).~~
- ~~(7) Replaced Sections 7, 8, 10, & 11 with a new Section 8, referencing Specification C 1264.~~
- ~~(8) Added additional key words: revised.~~

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