



Designation: C 931/C 931M – 02

Standard Specification for Exterior Gypsum Soffit Board¹

This standard is issued under the fixed designation C 931/C 931M; 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 (ϵ) 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 exterior gypsum soffit board, designed to be used for exterior soffits and carport ceilings that are completely protected from contact with liquid water.

NOTE 1—Specification C 840 contains application procedures for exterior gypsum soffit board.

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

2. Referenced Documents

2.1 ASTM Standards:

C 473 Test Methods for Physical Testing of Gypsum Panel Products²

C 645 Specification for Nonstructural Steel Framing Members²

C 840 Specification for Application and Finishing of Gypsum Board²

C 1264 Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Board²

E 84 Test Method for Surface Burning Characteristics of Building Materials³

E 119 Test Methods for Fire Tests of Building Construction and Materials³

3. Materials and Manufacture

3.1 Gypsum soffit board shall consist of a noncombustible core, essentially gypsum, surfaced with paper bonded to the core.

3.2 Exterior gypsum soffit board, type X (special fire-resistant) designates exterior gypsum soffit board complying

with this specification that provides not less than 1-h fire-resistance for boards $\frac{5}{8}$ -in. (15.9-mm) thick or $\frac{3}{4}$ -h fire-resistance for boards $\frac{1}{2}$ -in. (12.7-mm) thick, applied parallel with and on each side of load bearing 2 by 4 wood studs spaced 16 in. (406 mm) on center with 6d coated nails, $\frac{1}{8}$ -in. (48-mm) long, 0.0915-in. (2.3-mm) diameter shank, $\frac{1}{4}$ -in. (6.4-mm) diameter heads, spaced 7 in. (178 mm) on center with exterior gypsum soffit board joints staggered 16 in. (406 mm) on each side of the partition and tested in accordance with Test Methods E 119.

NOTE 2—Consult producers for independent test data on assembly details and fire-resistance classifications for other types of construction. See test reports or listings from recognized fire testing laboratories for assembly particulars, materials, and classifications.

3.3 Gypsum soffit board shall have a maximum flame-spread classification of 25 when tested in accordance with the requirements of Test Method E 84.

4. Physical Properties

4.1 Flexural Strength:

4.1.1 Specimens shall be tested in accordance with Test Methods C 473. When tested face up and when tested face down the specimens shall have an average breaking load of 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
$\frac{1}{2}$ (12.7)	110 (489)	40 (178)	107 (476)	36 (160)
$\frac{5}{8}$ (15.9)	150 (668)	50 (222)	147 (654)	46 (205)

4.2 Humidified Deflection:

4.2.1 When tested in accordance with Test Methods C 473, specimens taken from the gypsum soffit board shall have an average deflection of no more than the following:

Thickness, in. (mm)	Humidified Deflection, Eighths of an in. (mm)
$\frac{1}{2}$ (12.7)	7 (22)
$\frac{5}{8}$ (15.9)	4 (13)

4.3 Core, End, and Edge Hardness:

4.3.1 When tested in accordance with Test Methods C 473,

¹ This specification is under the jurisdiction of ASTM Committee C11 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.

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² Annual Book of ASTM Standards, Vol 04.01.

³ Annual Book of ASTM Standards, Vol 04.07.

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